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## **Semi-Annual Assessment Monitoring and Statistical Analysis Report**

*Prepared for*

Wayne County Closed MSWLF and Active C&D Landfill, Dudley  
Dudley, North Carolina

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**February, 2009**

**Permit Number: 96-01**

**MESCO Project Number: G09016.0**

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Completed on August 3, 2009



Municipal Engineering Services Company, P.A.  
Garner, Boone and Morehead City, North Carolina

[REDACTED] DENR USE ONLY:  Paper Report  Electronic Data - Email CD (data loaded: Yes / No )

Doc/Event #:

NC DENR

Division of Waste Management - Solid Waste

**Environmental Monitoring  
Reporting Form**

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

**Instructions:**

- Prepare one form for each individually monitored unit.
- Please type or print legibly.
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i)).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

**Solid Waste Monitoring Data Submittal Information**

Name of entity submitting data (laboratory, consultant, facility owner):

Municipal Engineering Services Co., PA

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Jonathan Pfohl Phone: (919) 772-5393

E-mail: jpfohl@mesco.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Wayne County Closed MSWLF and Active C&D Landfill	460-B South Landfill Road Dudley, NC 28333	96-01	.1600	February 17, 2009

**Environmental Status: (Check all that apply)**

Initial/Background Monitoring  Detection Monitoring  Assessment Monitoring  Corrective Action

**Type of data submitted: (Check all that apply)**

Groundwater monitoring data from monitoring wells  
 Groundwater monitoring data from private water supply wells  
 Leachate monitoring data  
 Surface water monitoring data

Methane gas monitoring data  
 Corrective action data (specify) \_\_\_\_\_  
 Other(specify) \_\_\_\_\_

**Notification attached?**

- No. No groundwater or surface water standards were exceeded.  
 Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.  
 Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

**Certification**

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Jonathan Pfohl

Environmental Specialist

(919) 772-5393

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Signature

9/3/09

Affix NC Licensed/ Professional Geologist Seal

Facility Representative Address

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009



Ms. Jaclynne Drummond  
 Solid Waste Section  
 Division of Waste Management  
 North Carolina Department of Environment and Natural Resources  
 401 Oberlin Road, Suite 150  
 Raleigh, NC 27605

August 3, 2009

Re: Groundwater Sampling and Statistical Analysis  
 Wayne County Closed MSW and active C&D Landfill, Dudley  
 Permit # : 96-01  
 MESCO Project No. G09016.0

Dear Ms. Drummond:

### **Introduction**

The Wayne County unlined closed Municipal Solid Waste Landfill (MSWLF) and active Construction and Demolition (C&D) Landfill located in Dudley NC, currently operating under permit #96-06 is required to submit semi-annual compliance reports as a condition of 15A NCAC 13B.1630. This event was completed on February 17, 2009 and performed according to the semi-annual monitoring schedule prescribed by the NC Solid Waste Section rules/regulations.

The closed MSWLF ceased operation prior to 1998 and the C&D landfill continues operation upon the closed MSWLF. Since they are in essence one contiguous landfill they are combined and treated as a single unit for overall continuity in reporting. The assessment monitoring program consists of six groundwater and two surface water sampling locations. This report includes a summary of field procedures, laboratory analysis, statistical analysis, tables and graphs of current/historical data, single-day potentiometric map with flow directions/rates, and the complete laboratory analytical report.

### **Sampling Procedure**

Municipal Engineering Services Company, P.A. (MESCO) performed this sampling event in accordance with the site specific approved Sampling & Analysis Plan (SAP) contained within the *Corrective Action Plan* (CAP) dated February 25, 2009. The SAP consists of collection of water samples from seven downgradient groundwater monitoring wells (MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8), one background well (MW-1), and three surface water points (SW-1, SW-2, SW-3) with all locations shown upon the enclosed single-day potentiometric map.

All sampling was conducted utilizing methodology outlined in the NCDENR SWS guidance document *Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling* revised April 2008. The depth to water in each well was gaged prior to purging to quantify the static water level and utilized for construction of the attached single-day potentiometric map. In addition to the required field measurements (pH, specific conductance, temperature) additional monitored natural attenuation (MNA) field parameters dissolved oxygen (DO) oxidative reduction potential (ORP), and total dissolved solids (TDS) were also quantified in order to better discern the water quality.

MESCO field personnel utilized portable monitoring methods and all samples were collected in laboratory-prepared pre-preserved containers. Low flow pumping methodology was utilized to adequately purge the wells and samples were than immediately procured via a disposable baler. All samples were properly collected, separated based upon likelihood of potential cross-contamination, kept upon ice, and transported to Pace Analytical Laboratories Inc. (PACE) of Huntersville NC under proper chain of custody (C-O-C).

## Field and Laboratory Results

All of the groundwater monitoring locations contained in the SAP were sampled during this event with the exception of surface waters SW-2 and SW-3, which were dry. All of the water samples were analyzed for the complete Appendix I list of volatile organic compounds (VOCs) via method EPA 8260 and total unfiltered metals via EPA 6010. In addition to the Appendix I constituents, samples collected from MW-2, MW-8, and background well MW-1 were analyzed for MNA parameters. The MNA parameters analyzed during this event included alkalinity (SM 2320B), ferrous iron (SM 4500-Fe D#4), sulfide (SM4500-S2D), sulfate (ASTM D516-90), nitrogen (EPA 353.2), and total organic carbon (SM 5310B). Quality control measures were also implemented during this event which included submittal and subsequent quantification of blanks for VOC analysis only.

The enclosed field data sheet presents all field parameter data and appears to be generally consistent relative to each other and congruent with data historically reported. Recorded concentrations of DO and reduction potential were spatially variable but generally indicate aerobic to slightly anaerobic conditions. All water samples were analyzed utilizing the Method Detection Limits (MDL) with reference to the Solid Waste Section detection limit (SWSL) values current as of the sampling event. All detected constituents were referenced to the Groundwater Protection Standards (GWP) and compared to the North Carolina Groundwater Standards (NCGW2L) or the North Carolina Surface Water Standards (NCSW2B) for regulatory exceedance. The results are shown in the enclosed tables titled "Detection Scan".

The following tables summarize all of the metals and VOC constituents that exceeded the NCGW2L/NCSW2B Standard during this monitoring event.

**Table 1. NCGW2L or NCSW2B Exceedance Summary (Total Metals)**

Well	Cadmium	Silver	Cumulative Total
NCGW2L/NCSW2B	1.75	0.06	-
MW-5	11.3		11.3
MW-6	2.3		2.3
SW-1		<u>0.11<sup>j</sup></u>	0.11
Total	17.8	0.11	17.8

*Italicized* indicates detected above own respective historical identified range. "<sup>j</sup>" <SWSL therefore estimated concentration concentrations shown in (ug/L)

Inorganic constituents (total metals) were detected in quantifiable concentrations within MW-2, MW-5, MW-6, and MW-8. Cadmium in samples collected from MW-5 and MW-6 was the only metal detected in a concentration in exceedance of the NCGW2L Standard. The sample collected from surface water point SW-1 was found to contain the premier detection of silver in a concentration above the applicable NCSW2B Action Level (AL) Standard. However, the detection was reported as an estimated concentration between the MDL and the SWSL ("<sup>j</sup>" qualifier).

**Table 2. NCGW2L Exceedance Summary (VOCs)**

Well	Benzene	1,4-DCB	Cumulative Total
NCGW2L	1	1.4	-
MW-2	2	3.3	5.5
MW-8		2.5	2.5
Total	2	5.8	8

*Italicized* indicates detected above own respective historical identified range. "<sup>j</sup>" <SWSL therefore estimated concentration concentrations shown in (ug/L)

Downgradient monitoring well MW-2 and cross gradient MW-8 contained VOC detections above the NCGW2L Standard during this sampling event. Both locations were found to contain quantifiable concentrations of dissolved phase aromatics. The reduction of the reportable detection limits for 1,4-DCB and benzene are directly responsible for the majority of VOC detections reported since 2007. None of the VOCs were detected in concentrations outside of their own respective identified range during this event. Generally all of the detected VOCs are low concentrations, typical of contaminants commonly found in groundwater at MSWLF facilities. The source is likely attributed to leachate/landfill gas (LFG) originating from the closed unlined MSWLF.

## Statistical Analysis

MESCO also completed the statistical analysis as required by the Solid Waste Section. The statistical analysis was conducted upon all of the monitoring wells surrounding the closed MSWLF. The purpose of these analyses was to determine, in comparison to background levels, statistical significance of the closed MSWLF parameters (Appendix I) constituents detected during the February 2009 event. The statistical analysis was conducted utilizing Chemstat which was developed specifically for RCRA Subtitle D sites and conforms to both current EPA and SWS protocols.

### Inter-well Analyses (Metals)

A preliminary data screening was conducted upon the metals detected in all monitoring locations. Parameters detected with concentrations found below quantifiable levels (SWSL) and below those detected within the background well were eliminated and a statistical analysis was not conducted for that particular constituent/well. An inter-well statistical analysis was conducted upon total metals detected during this sampling event. Monitoring well MW-1 was defined as the background well, and an upper tolerance limit (UTL) with 95% coverage was computed for each detected constituent from the background data at a 95% level of confidence. For each tested constituent, an appropriate statistical analysis method was selected based on the percentages of non-detects (%ND) in the historical background data. The following table (Table 3) summarizes the methods used for four different %ND ranges.

**Table 3.** Statistical Analysis Methods for Various %ND Ranges

%ND	Analysis Method	ND Substitution
%ND<15%	Parametric tolerance limit	1/2 ND
15%<%ND<50%	Parametric tolerance limit	Cohen or 1/2 ND
50%<%ND<90%	Non-parametric tolerance limit	1/2 ND
90%<%ND	Poisson tolerance limit	-

NOTE: For parametric tolerance interval, normality of the background data was checked by the Shapiro-Wilks normality test, as the method requires that the data be normally distributed.

Five metals were tested for statistical significance through inter-well analysis and the summary report is enclosed. For arsenic and cadmium the Poisson tolerance limit method was utilized on the original data with no ND substitution since the constituents had rarely been detected within the background well. For barium, copper, and zinc the non-parametric tolerance limit with ½ ND substitution of the original data was utilized since the background data was not normally distributed or the Poisson count of the background samples exceeded the maximum recommended for the Poisson tolerance limit.

### Intra-well Analyses (Metals)

Intra-well Analyses were conducted only upon those constituents that were initially found to be statistically significant by inter-well analysis. In general, intra-well analysis is conducted in order to attempt to differentiate true contamination from spatial variability. Baseline levels in this context are defined as the background level derived from the data in a given downgradient well. Intra-well analyses through Shewhart-CUSUM control charts require a minimum of eight independent historical sampling events and a detection rate greater than 25% (%ND≤75%). Due to the detection rate criteria Shewhart-CUSUM control charts could not be developed for barium within MW-6. Intra-well analysis for chromium within MW-6 was completed via Wilcoxon Rank-Sum non-parametric method since this method is suitable to high percentages of non-detects and has a reduced susceptibility to outlier concentrations.

## Poisson Prediction Interval (VOCs)

All historical VOC detections in the background well MW-1 were pooled in order to determine the total number of detections, from which the expected number of detections in a single down gradient monitoring point ( $y^*$ ) was derived by utilizing the Poisson prediction interval. The parameter  $y^*$  is defined by the following equation:

$$y^* = cy + \frac{t^2 c}{2} + tc \sqrt{y \left(1 + \frac{1}{c}\right) + \frac{t^2}{4}}$$

where

$c = 1/n$  ( $n$  = number of background samples)

$t$  = one-sided value of students  $t$ -Statistic at 95% confidence <sup>a</sup>

$y$  = number of events observed in  $n$  previous samples

$y^*$  = expected number of events in a single future sample

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<sup>a</sup> Gibbons, R.D., 1994, Statistical methods for groundwater monitoring: John Wiley & Sons, Inc., p.12.

For each monitoring location showing any VOC detections, the number of detected VOCs was counted with each detection being considered a “hit”. The number was then compared with the expected number of detections derived from the background VOC data. The value of Student’s  $t$ -Statistic was derived from tabulated values included in Gibbons (1994).

## Results

Data distributions were reviewed using box and whiskers plots. In order to evaluate variability in concentrations with respect to time and season, time series plots were generated for all of the analytes detected above the NCGW2L. Time series plots were also visually evaluated for seasonality and “outliers” (defined as data that appears to be incongruent with respect to historical results). There appears to not be any apparent outliers or seasonality in the latest data record.

The numbers of metal detections continue to be consistent with historical results. The inter-well analysis results performed for metals upon all of the monitoring wells indicate that cadmium within MW-5 and barium within MW-6 were detected in concentrations over established background levels. However, according to further intra-well analysis, neither metal was found to have increased compared to their own historical levels.

The Poisson Tolerance Interval at a 95% confidence level was completed for all of the VOCs detected above the SWSL or the NCGW2L Standard. Due to the lack of historical VOC detections within the background well any VOC detection is considered statistically significant via the Poisson Tolerance Interval. Downgradient well MW-2 and up/cross gradient MW-8 were the only monitoring locations found to be impacted statistically by VOCs as summarized in the following Table 4.

**Table 4.** Poisson Tolerance Interval Analyses Summary for VOCs

Well	Benzene	1,4-DCB	Chlorobenzene	Cumulative	Maximum Historical Cumulative
MW-2	<b>2</b>	<b>3.3</b>	12.2	17.5	44
MW-8		<b>2.5</b>		2.5	134
Total	2	5.8	12.2	20	516

**Bold** indicates detected  $\geq$  NCGW2L *Italicized* indicates detected above own respective historical identified range concentrations shown in (ug/L)

Low but quantitative concentrations of VOCs continue to be detected within only downgradient well MW-2 and up/cross gradient MW-8. Both wells were found to contain only quantifiable concentrations of dissolved phase aromatics. The cumulative VOC concentrations remain relatively low with neither well exhibiting an increasing trend through Mann-Kendall Trend Analysis, Sen's Slope Analysis, and interpretation of the EWMA control charts. However, due to the historical absence of VOCs detected within the background well both MW-2 and MW-8 are considered to be impacted according to the Poisson Prediction Interval Analysis at a 95% confidence level.

Although it should be noted that the Poisson Tolerance Interval Analysis simply is based upon the number of detections without regard for biodegradation derivatives of the same compound. Regardless of this limitation of the Poisson Prediction Interval both MW-2 and MW-8 appear to be impacted by aromatics. After further intra-well analyses through Mann-Kendall Trend Analysis, Sen's Slope Analysis, and the interpretation of the exponentially

weighted moving average (EWMA) control charts none of the detected VOCs were found to be exhibiting an upward trend. The lone quantifiable VOC detected within MW-8 (1,4-DCB) has consistently decreased in concentration each of the last 11 events over 5 years.

The presence of aromatic derivatives, the reduction in VOC concentrations, and the interpretation of other geochemical data indicate that natural attenuation has very likely occurred and is expected to continue in both impacted areas.

## Groundwater and Surface Water Characterization

MESCO completed and enclosed the required single-day potentiometric map from ground water elevation data compiled during this event. Groundwater flow rates and directions were also calculated based upon this data and is included in the attached table. Groundwater generally flows in a northwest direction with rates ranging from <3ft./yr (MW-5) to <415 ft./yr. (MW-3) averaging approximately 62 ft./yr. The flow directions and gradients are consistent with historical observations, showing no changes that would result in a different interpretation of the groundwater system or hinder the effectiveness of the current monitoring network.

## Conclusion

The statistical analysis results conducted on metals indicate that none of the concentrations have exhibited a statistically significant increase during this event. Metal concentrations have historically exhibited large fluctuations and none of the constituents are exhibiting an upward trend. Monitoring wells MW-2 and MW-8 continue to be the only wells containing statistically significant VOCs. Current findings continue to indicate that the impacted portions of the surficial aquifer will remain isolated within the relevant compliance boundary for a reasonable period of time. There is evidence that the active gas collection and control system (GCCS) and natural attenuation is expected to continue to decrease the VOC concentrations within the groundwater. The closed MSWLF has a cohesive cap to reduce percolation/leachate generation, institutional controls are in place, and there is public water supply to the surrounding area. Additional wells are planned to be installed soon in an attempt to further delineate the VOC impact within both the MW-2 and MW-8 areas. The results of this field investigation are planned to be submitted with the revised CAP.

The facility will continue assessment monitoring and is scheduled to be sampled again in August 2009. Implementation of MNA monitoring of select wells as proposed in the approved *corrective action plan* is expected to commence during the next event. If you have any questions or comments regarding this report, please contact me by phone at (919) 772-5393 or by email at [jpfohl@mesco.com](mailto:jpfohl@mesco.com).

Sincerely,  
MUNICIPAL ENGINEERING SERVICES CO., P.A.



Jonathan Pfohl  
Environmental Specialist

Enclosures

cc: Mr. Tim Rogers  
Wayne County

**Detection Scan All Detections above SWSL, NCGW2L, NCSW2B, or GWP  
Wayne County Closed MSWLF & Active C&D Landfill (Dudley)**

Sample ID	Parameter Name <sup>1</sup>	Sample Date	Result	Unit	MDL <sup>2</sup>	SWSL <sup>3</sup>	NCGW2 L <sup>4</sup>	NCSW 2B <sup>5</sup>	GWP <sup>6</sup>	Exceedance	Preliminary Cause
MW-1	Nitrogen, Nitrate	2/17/09	353	ug/L	100	100	10000				
<b>MW-2</b>	<b>1,4-Dichlorobenzene</b>	<b>2/17/09</b>	<b>3.3</b>	<b>ug/L</b>	<b>0.33</b>	<b>1.0</b>	<b>1.4</b>		<b>1.9</b>		<b>Leachate &amp;/or LFG</b>
MW-2	Arsenic	2/17/09	13.5	ug/L	2.7	10	50				
MW-2	Barium	2/17/09	191	ug/L	0.20	100	2000				
<b>MW-2</b>	<b>Benzene</b>	<b>2/17/09</b>	<b>2</b>	<b>ug/L</b>	<b>0.25</b>	<b>1.0</b>	<b>1</b>		<b>1</b>		<b>Leachate &amp;/or LFG</b>
MW-2	Chlorobenzene	2/17/09	12.2	ug/L	0.23	3	50				
MW-2	Copper	2/17/09	73.8	ug/L	0.30	10	1000				
<b>MW-2</b>	<b>Vanadium</b>	<b>2/17/09</b>	<b>9.2<sup>j</sup></b>	<b>ug/L</b>	<b>0.20</b>	<b>25.0</b>			<b>3.5</b>	<b>5.7</b>	
MW-2	Zinc	2/17/09	19.4	ug/L	0.40	10	1050				
<b>MW-5</b>	<b>Cadmium</b>	<b>2/17/09</b>	<b>11.3</b>	<b>ug/L</b>	<b>0.50</b>	<b>1.0</b>	<b>1.75</b>		<b>9.55</b>		<b>Natural</b>
<b>MW-5</b>	<b>Vanadium</b>	<b>2/17/09</b>	<b>23.6<sup>j</sup></b>	<b>ug/L</b>	<b>0.20</b>	<b>25.0</b>			<b>3.5</b>	<b>20.1</b>	
MW-5	Zinc	2/17/09	19.7	ug/L	0.40	10	1050				
MW-6	Barium	2/17/09	447	ug/L	0.20	100	2000				
<b>MW-6</b>	<b>Cadmium</b>	<b>2/17/09</b>	<b>2.3</b>	<b>ug/L</b>	<b>0.50</b>	<b>1.0</b>	<b>1.75</b>		<b>0.55</b>		<b>Natural</b>
<b>MW-7</b>	<b>Vanadium</b>	<b>2/17/09</b>	<b>14.8<sup>j</sup></b>	<b>ug/L</b>	<b>0.20</b>	<b>25.0</b>			<b>3.5</b>	<b>11.3</b>	
<b>MW-8</b>	<b>1,4-Dichlorobenzene</b>	<b>2/17/09</b>	<b>2.5</b>	<b>ug/L</b>	<b>0.33</b>	<b>1.0</b>	<b>1.4</b>		<b>1.1</b>		<b>Leachate &amp;/or LFG</b>
MW-8	Barium	2/17/09	127	ug/L	0.20	100	2000				
MW-8	Nitrogen, Nitrate	2/17/09	489	ug/L	100	100	10000				
<b>SW-1</b>	<b>Silver</b>	<b>2/17/09</b>	<b>0.11<sup>j</sup></b>	<b>ug/L</b>	<b>0.10</b>	<b>10.0</b>		<b>0.06</b>	<b>0.05</b>		<b>Natural</b>

<sup>1</sup> Table contains all constituents detected above SWSL, GWP, NCGW2L, or NCSW2B

<sup>2</sup> MDL = Method Detection Limit

<sup>3</sup> SWSL = Solid Waste Section Reporting Limit (Current as of Sampling Event)

<sup>4</sup> NCGW2L = North Carolina Ground Water 2L Standard (Current as of Sampling Event)

<sup>5</sup> NCSW2B = North Carolina Surface Water 2B Standard for Specific Stream Classification (Current as of Sampling Event)

<sup>6</sup> GWP = Groundwater Protection Standard (Current as of Sampling Event)

LFG = Landfill Gas

NE = Not Established

**BOLD** = Concentration =>GWP, NCGW2L, or NCSW2B Standard (Current as of Sampling Event)

**Detection Scan All Detections above MDL as Reported by Laboratory**

**Wayne County Closed MSWLF & Active C&D Landfill (Dudley)**

Sample ID	Parameter Name <sup>1</sup>	Sample Date	Result	Unit	MDL <sup>2</sup>	SWSL <sup>3</sup>	NCGW 2L <sup>4</sup>	NCSW2 B <sup>5</sup>	GWP <sup>6</sup>	Exceedance	Preliminary Cause
MW-1	Barium	2/17/09	17.9	ug/L	0.20	100	2000				
MW-1	Cadmium	2/17/09	0.98	ug/L	0.50	1.0	1.75				
MW-1	Chloroform	2/17/09	0.52	ug/L	0.14	5.0	70				
MW-1	Copper	2/17/09	3.5	ug/L	0.30	10.0	1000				
MW-1	Nitrogen, Nitrate	2/17/09	353	ug/L	100	100	10000				
MW-1	Sulfide	2/17/09	250	ug/L	100	0.10	NE	NE			
MW-1	Total Organic Carbon	2/17/09	2400	ug/L	1000	1.0	NE	NE			
MW-1	Vanadium	2/17/09	0.68	ug/L	0.20	25.0			3.5		
MW-2	1,2-Dichlorobenzene	2/17/09	0.36	ug/L	0.30	5.0	620				
<b>MW-2</b>	<b>1,4-Dichlorobenzene</b>	<b>2/17/09</b>	<b>3.3</b>	<b>ug/L</b>	<b>0.33</b>	<b>1.0</b>	<b>1.4</b>		<b>1.9</b>		<b>Leachate &amp;/or LFG</b>
MW-2	Alkalinity	2/17/09	508000	ug/L	5000	NE	NE	NE			
MW-2	Arsenic	2/17/09	13.5	ug/L	2.7	10.0	50				
MW-2	Barium	2/17/09	191	ug/L	0.20	100	2000				
<b>MW-2</b>	<b>Benzene</b>	<b>2/17/09</b>	<b>2</b>	<b>ug/L</b>	<b>0.25</b>	<b>1.0</b>	<b>1</b>		<b>1</b>		<b>Leachate &amp;/or LFG</b>
MW-2	Chlorobenzene	2/17/09	12.2	ug/L	0.23	3.0	50				
MW-2	Chromium	2/17/09	3.7	ug/L	0.40	10.0	50				
MW-2	cis-1,2-Dichloroethene	2/17/09	0.29	ug/L	0.19	5.0	70				
MW-2	Cobalt	2/17/09	4.2	ug/L	0.60	10.0			70		
MW-2	Copper	2/17/09	73.8	ug/L	0.30	10.0	1000				
MW-2	Iron, Ferrous	2/17/09	2700	ug/L	2000	2.0	NE	NE			
MW-2	Nickel	2/17/09	1.7	ug/L	1.7	50.0	100				
MW-2	Selenium	2/17/09	4.8	ug/L	3.8	10.0	50				
MW-2	Silver	2/17/09	0.7	ug/L	0.10	10.0	18				
MW-2	Sulfate	2/17/09	14500	ug/L	5000	250000	250000				
MW-2	Total Organic Carbon	2/17/09	41200	ug/L	5000	5.0	NE	NE			
<b>MW-2</b>	<b>Vanadium</b>	<b>2/17/09</b>	<b>9.2<sup>j</sup></b>	<b>ug/L</b>	<b>0.20</b>	<b>25.0</b>			<b>3.5</b>	<b>5.7</b>	
MW-2	Zinc	2/17/09	19.4	ug/L	0.40	10.0	1050				
MW-3	Barium	2/17/09	18.3	ug/L	0.20	100	2000				
MW-3	Copper	2/17/09	1.3	ug/L	0.30	10.0	1000				
MW-3	Vanadium	2/17/09	2.6	ug/L	0.20	25.0			3.5		
MW-3	Zinc	2/17/09	1.3	ug/L	0.40	10.0	1050				
MW-4	Barium	2/17/09	70.1	ug/L	0.20	100	2000				
MW-4	Chloroform	2/17/09	0.21	ug/L	0.14	5.0	70				
MW-4	Copper	2/17/09	2.1	ug/L	0.30	10.0	1000				
MW-4	Vanadium	2/17/09	0.53	ug/L	0.20	25.0			3.5		
MW-5	Arsenic	2/17/09	5.9	ug/L	2.7	10.0	50				
MW-5	Barium	2/17/09	67.8	ug/L	0.20	100	2000				
MW-5	Beryllium	2/17/09	0.96	ug/L	0.10	1.0			4		
<b>MW-5</b>	<b>Cadmium</b>	<b>2/17/09</b>	<b>11.3</b>	<b>ug/L</b>	<b>0.50</b>	<b>1.0</b>	<b>1.75</b>		<b>9.55</b>		<b>Natural</b>
MW-5	Chromium	2/17/09	4.4	ug/L	0.40	10.0	50				
MW-5	Cobalt	2/17/09	3.7	ug/L	0.60	10.0			70		

Sample ID	Parameter Name <sup>1</sup>	Sample Date	Result	Unit	MDL <sup>2</sup>	SWSL <sup>3</sup>	NCGW 2L <sup>4</sup>	NCSW2 B <sup>5</sup>	GWP <sup>6</sup>	Exceedance	Preliminary Cause
MW-5	Copper	2/17/09	7.7	ug/L	0.30	10.0	1000				
MW-5	Nickel	2/17/09	6.2	ug/L	1.7	50.0	100				
<b>MW-5</b>	<b>Vanadium</b>	<b>2/17/09</b>	<b>23.6<sup>j</sup></b>	<b>ug/L</b>	<b>0.20</b>	<b>25.0</b>			<b>3.5</b>	<b>20.1</b>	
MW-5	Zinc	2/17/09	19.7	ug/L	0.40	10.0	1050				
MW-6	Arsenic	2/17/09	3.7	ug/L	2.7	10.0	50				
MW-6	Barium	2/17/09	447	ug/L	0.20	100	2000				
MW-6	Beryllium	2/17/09	0.79	ug/L	0.10	1.0			4		
<b>MW-6</b>	<b>Cadmium</b>	<b>2/17/09</b>	<b>2.3</b>	<b>ug/L</b>	<b>0.50</b>	<b>1.0</b>	<b>1.75</b>		<b>0.55</b>		<b>Natural</b>
MW-6	Chromium	2/17/09	2.5	ug/L	0.40	10.0	50				
MW-6	Copper	2/17/09	2.2	ug/L	0.30	10.0	1000				
MW-6	Nickel	2/17/09	5.4	ug/L	1.7	50.0	100				
MW-6	Vanadium	2/17/09	3	ug/L	0.20	25.0			3.5		
MW-6	Zinc	2/17/09	5.8	ug/L	0.40	10.0	1050				
MW-7	Arsenic	2/17/09	2.9	ug/L	2.7	10.0	50				
MW-7	Barium	2/17/09	60	ug/L	0.20	100	2000				
MW-7	Chromium	2/17/09	4.7	ug/L	0.40	10.0	50				
MW-7	Copper	2/17/09	1.6	ug/L	0.30	10.0	1000				
<b>MW-7</b>	<b>Vanadium</b>	<b>2/17/09</b>	<b>14.8<sup>j</sup></b>	<b>ug/L</b>	<b>0.20</b>	<b>25.0</b>			<b>3.5</b>	<b>11.3</b>	
MW-7	Zinc	2/17/09	0.58	ug/L	0.40	10.0	1050				
<b>MW-8</b>	<b>1,4-Dichlorobenzene</b>	<b>2/17/09</b>	<b>2.5</b>	<b>ug/L</b>	<b>0.33</b>	<b>1.0</b>	<b>1.4</b>		<b>1.1</b>		<b>Leachate &amp;/or LFG</b>
MW-8	Barium	2/17/09	127	ug/L	0.20	100	2000				
MW-8	Chlorobenzene	2/17/09	0.65	ug/L	0.23	3.0	50				
MW-8	Cobalt	2/17/09	0.79	ug/L	0.60	10.0			70		
MW-8	Copper	2/17/09	1	ug/L	0.30	10.0	1000				
MW-8	Nitrogen, Nitrate	2/17/09	489	ug/L	100	100	10000				
MW-8	Sulfide	2/17/09	170	ug/L	100	0.10	NE		NE		
MW-8	Total Organic Carbon	2/17/09	23700	ug/L	1000	1.0	NE		NE		
SW-1	Barium	2/17/09	71.3	ug/L	0.20	100		20000			
SW-1	Chromium	2/17/09	1.3	ug/L	0.40	10.0		50			
SW-1	Nickel	2/17/09	2.1	ug/L	1.7	50.0		88			
<b>SW-1</b>	<b>Silver</b>	<b>2/17/09</b>	<b>0.11<sup>j</sup></b>	<b>ug/L</b>	<b>0.10</b>	<b>10.0</b>	<b>0.06</b>		<b>0.05</b>		<b>Natural</b>
SW-1	Vanadium	2/17/09	0.96	ug/L	0.20	25.0		NE			
SW-1	Zinc	2/17/09	9.4	ug/L	0.40	10.0		50			

<sup>1</sup> Table contains all constituents detected above MDL

<sup>2</sup> MDL = Method Detection Limit

<sup>3</sup> SWSL = Solid Waste Section Reporting Limit (Current as of Sampling Event)

<sup>4</sup> NCGW2L = North Carolina Ground Water 2L Standard (Current as of Sampling Event)

<sup>5</sup> NCSW2B = North Carolina Surface Water 2B Standard for Specific Stream Classification (Current as of Sampling Event)

<sup>6</sup> GWP = Groundwater Protection Standard (Current as of Sampling Event)

LFG = Landfill Gas

NE = Not Established

**BOLD** = Concentration =>GWP, NCGW2L, or NCSW2B Standard (Current as of Sampling Event)

### Hydrologic Properties at Monitoring Well Locations

#### Wayne County Closed MSWLF & Active C&D Landfill (Dudley)

Monitoring Well	Hydraulic Conductivity (cm/sec)	Effective Porosity (%)	Hydraulic Gradient	Flow Rate (ft/yr)	Flow Direction	Water Table Depth (ft)	Water Table Elev. (ft)
MW-1	5.40E-04	20	0.00636	17.75	N59W	15.91	147.35
MW-2	3.00E-04	20	0.01053	16.34	N55W	4.90	129.62
MW-3	6.40E-03	20	0.01252	414.38	N54W	0.71	134.10
MW-4	9.90E-04	20	0.00636	32.56	N59W	7.06	143.14
MW-5	3.10E-05	20	0.01797	2.88	N52W	3.01	121.77
MW-6	1.60E-04	20	0.00476	3.94	N68W	5.75	139.78
MW-7	7.30E-05	20	0.00837	3.16	N56W	7.30	136.29
MW-8	3.40E-04	20	0.00505	8.88	N67W	19.37	142.51

NOTE: Data for conductivities and effective porosity obtained from GAI Consultants' Water Sampling Report (January, 1995).

Hydrologic Gradient taken from the February 17, 2009 sampling event from water levels reported by Environment I.

Flow rate ( $Q$ ) is defined by the equation:

where 
$$Q = - \frac{K}{n_e} \cdot \frac{dh}{dl}$$

$K$  = hydraulic conductivity

$n_e$  = effective porosity

$dh$  = head difference

$dl$  = horizontal distance

# Statistical Analysis Results Summary

**Inter-Well Analyses Summary  
Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**

**Background Well: MW-1**

**Arsenic, total**

%ND	Normality	Method	ND Adj.	Upper Limit ( $\alpha = 95\%$ )	Unit
93.55	-	Poisson tolerance interval	ND	15.0	ug/l

Well	Result	Significance
MW-2	13.5	No

**Barium, total**

%ND	Normality	Method	ND Adj.	Upper Limit ( $\alpha = 95\%$ )	Unit
90.323	-	Non-Parametric tolerance interval	1/2 ND	250	ug/l

Well	Result	Significance
MW-2	191	No
MW-6	447	Yes
MW-8	127	No

**Cadmium, total**

%ND	Normality	Method	ND Adj.	Upper Limit ( $\alpha = 95\%$ )	Unit
93.548	-	Poisson tolerance interval	ND	3	ug/l

Well	Result	Significance
MW-5	11.3	Yes
MW-6	2.3	No

**Copper, total**

%ND	Normality	Method	ND Adj.	Upper Limit ( $\alpha = 95\%$ )	Unit
90.323	-	Non-Parametric tolerance interval	1/2 ND	100	ug/l

Well	Result	Significance
MW-2	73.8	No

**Zinc, total**

%ND	Normality	Method	ND Adj.	Upper Limit ( $\alpha = 95\%$ )	Unit
83.87	-	Non-Parametric tolerance interval	1/2 ND	243	ug/l
Well	Result	Significance			
MW-2	19.4	No			
MW-5	19.7	No			

NOTE: Bold-faced monitoring points indicate detected levels exceed North Carolina Groundwater Standard.

**Summary of Pooled VOCs in Background Well (MW-1)**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**

Constituent	Samples	NDs	% NDs
1,1,1,2-Tetrachloroethane	32	32	100.00
1,1,1-Trichloroethane	32	32	100.00
1,1,2,2-Tetrachloroethane	32	32	100.00
1,1,2-Trichloroethane	32	32	100.00
1,1-Dichloroethane	32	32	100.00
1,1-Dichloroethene	32	32	100.00
1,2,3-Trichloropropane	32	32	100.00
1,2-Dibromo-3-chloropropane	32	32	100.00
1,2-Dibromoethane	32	32	100.00
1,2-Dichlorobenzene	32	32	100.00
1,2-Dichloroethane	32	32	100.00
1,2-Dichloropropane	32	32	100.00
1,4-Dichlorobenzene	33	33	100.00
2-Butanone	32	32	100.00
2-Hexanone	32	32	100.00
4-Methyl-2-Pentanone	32	32	100.00
Acetone	32	32	100.00
Acrylonitrile	32	32	100.00
Benzene	32	32	100.00
Bromochloromethane	32	32	100.00
Bromodichloromethane	32	32	100.00
Bromoform	32	32	100.00
Bromomethane	32	32	100.00
Carbon disulfide	32	32	100.00
Carbon tetrachloride	32	32	100.00
Chlorobenzene	32	32	100.00
Chloroethane	32	32	100.00
Chloroform	32	32	100.00
Chloromethane	32	32	100.00
cis-1,2-Dichloroethene	32	32	100.00
cis-1,3-Dichloropropene	32	32	100.00
Chlorodibromomethane	32	32	100.00
Dibromomethane	32	32	100.00
Ethylbenzene	32	32	100.00
Iodomethane	32	32	100.00
Dichloromethane	32	32	100.00
Styrene	32	32	100.00
Tetrachloroethylene	32	32	100.00
Toluene	32	32	100.00
trans-1,2-Dichloroethene	32	32	100.00
trans-1,3-Dichloropropene	32	32	100.00
trans-1,4-Dichloro-2-butene	32	32	100.00
Trichloroethylene	32	32	100.00
Trichlorofluoromethane	32	32	100.00
Vinyl acetate	32	32	100.00
Vinyl chloride	32	32	100.00
Xylene	32	32	100.00
<b>Total</b>	<b>1505</b>	<b>1505</b>	<b>100.00</b>

**Poisson Prediction Interval Based upon Pooled Background VOCs**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**

**All detected VOCs (Background Well: MW-1)**

Constituent	MW-2	MW-8
1,4-Dichlorobenzene	x	x
Benzene	x	
Chlorobenzene	x	
<b>Detection(s) per Scan</b>	3.00	1.00

Total number of sampling events [n] = 32.02

Total number of detections in background wells [y] = 0

Number of comparisons (downgradient wells) [k] = 7

One-sided value of Student's t-statistic (95% confidence) [t] = 2.566

Expected number of detections in a single future sample [y\*] = **0.2056**

**Statistically significant VOC detections at 95% confidence level within MW-2 & MW-8**

**Intra-Well Analysis Summary (Metals)**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**

Well	Barium	Cadmium
MW-5		no
MW-6	no <sup>WRS</sup>	

**EXPLANATION**

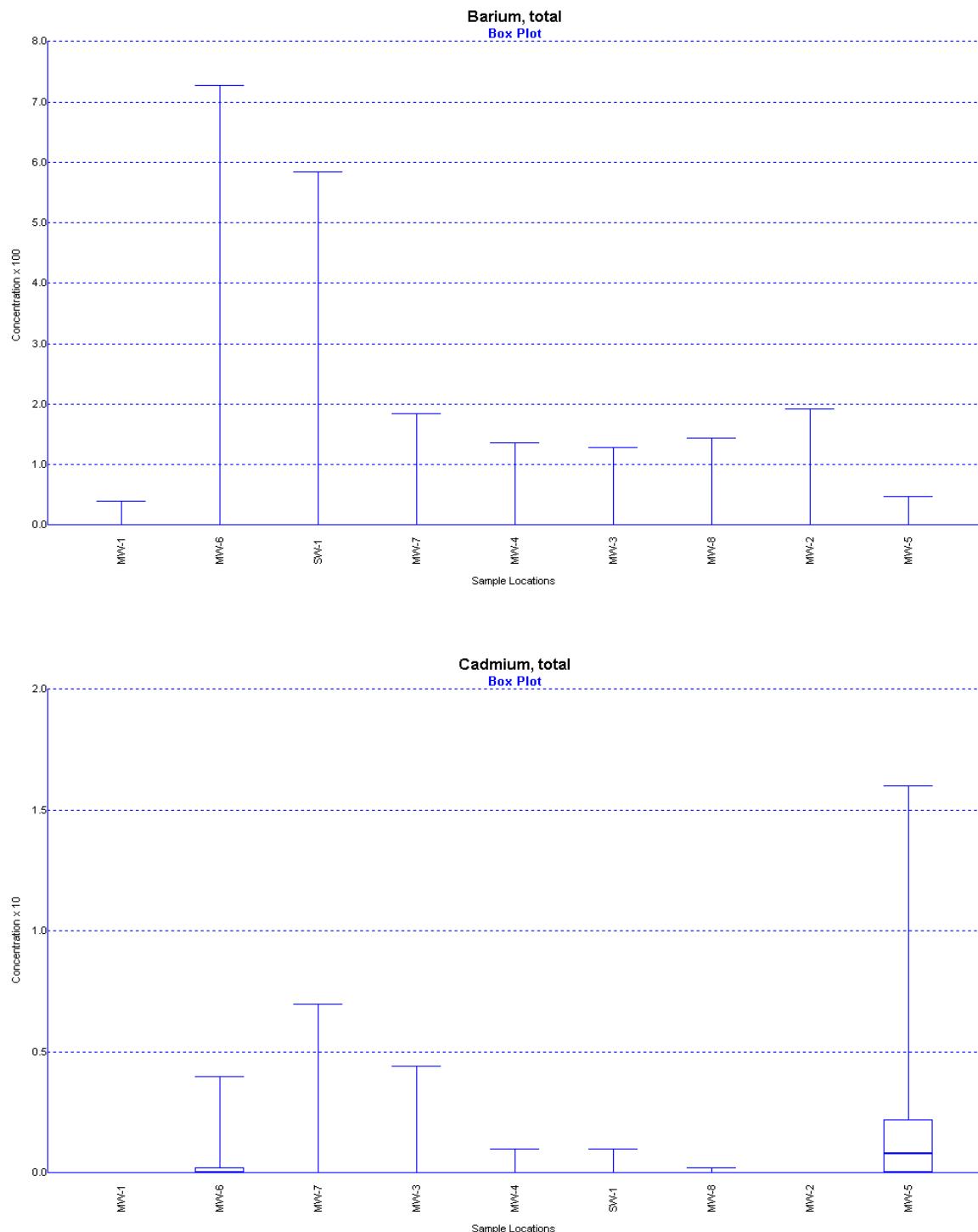
yes=detection statistically significant by introwell analysis

no=detection not statistically significant by introwell analysis

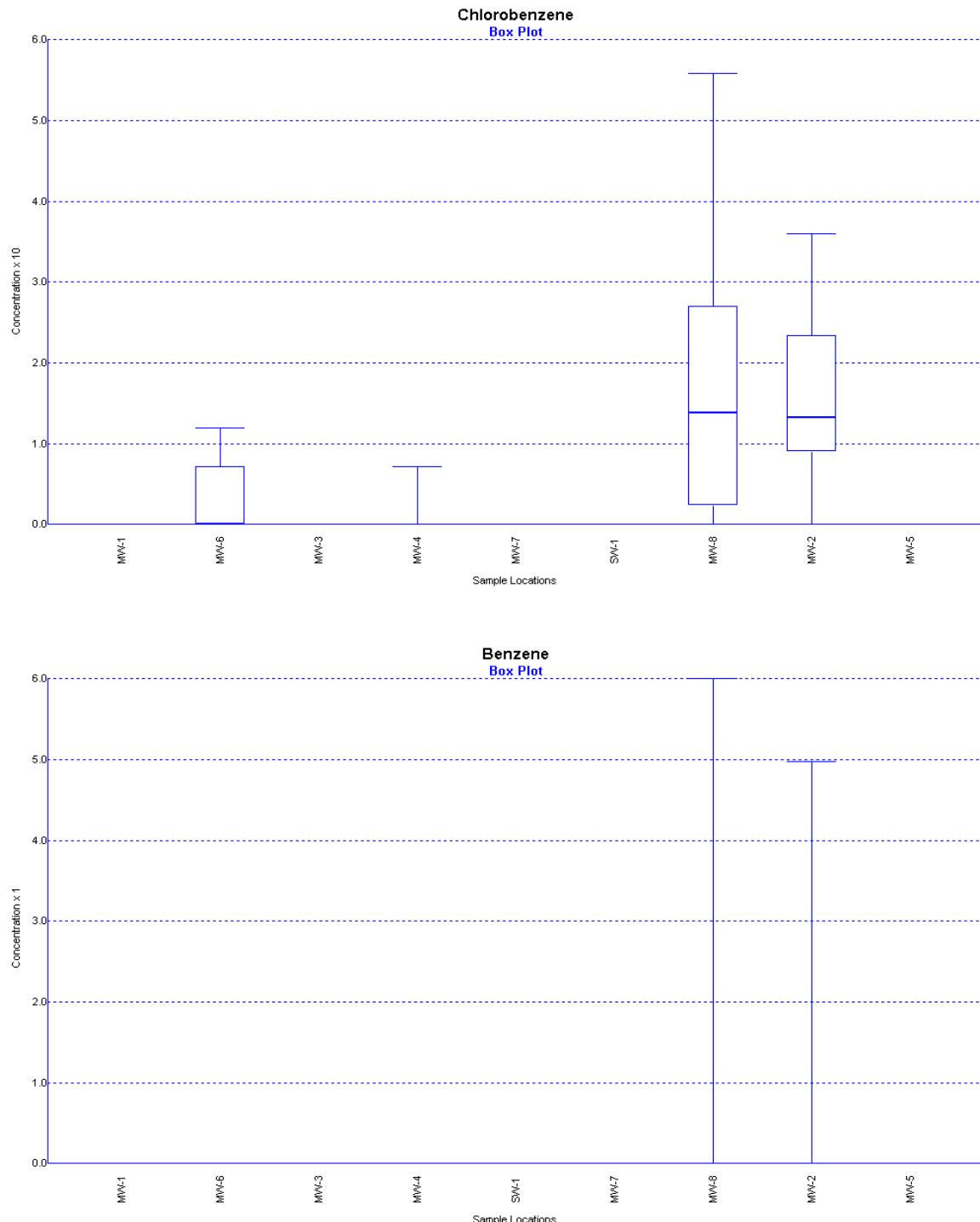
WRS=Wilcoxon Rank-Sum Intra-Well Comparison Utilized since Shewhart CUSUM not possible due to detection rate criteria.

**Barium within MW-6 has increased according to Intrawell Analysis**

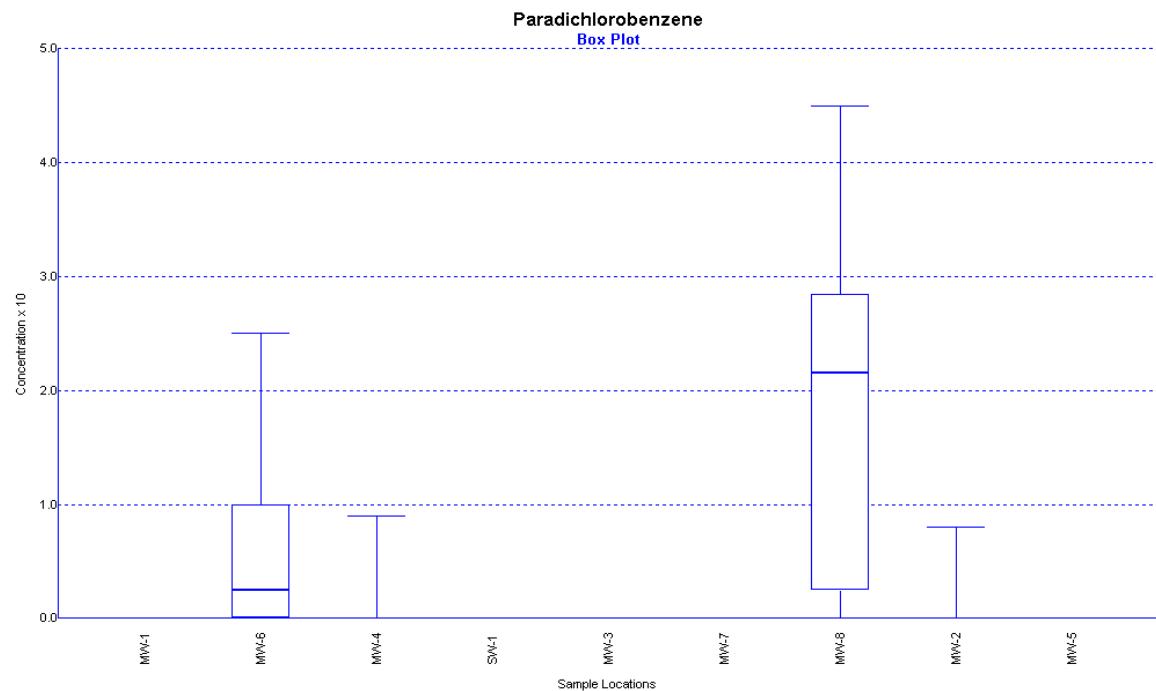
**Box Plots for Select Constituents (Metals)**  
**Wayne County Closed MSWLF and C&D Landfill (Dudley)**



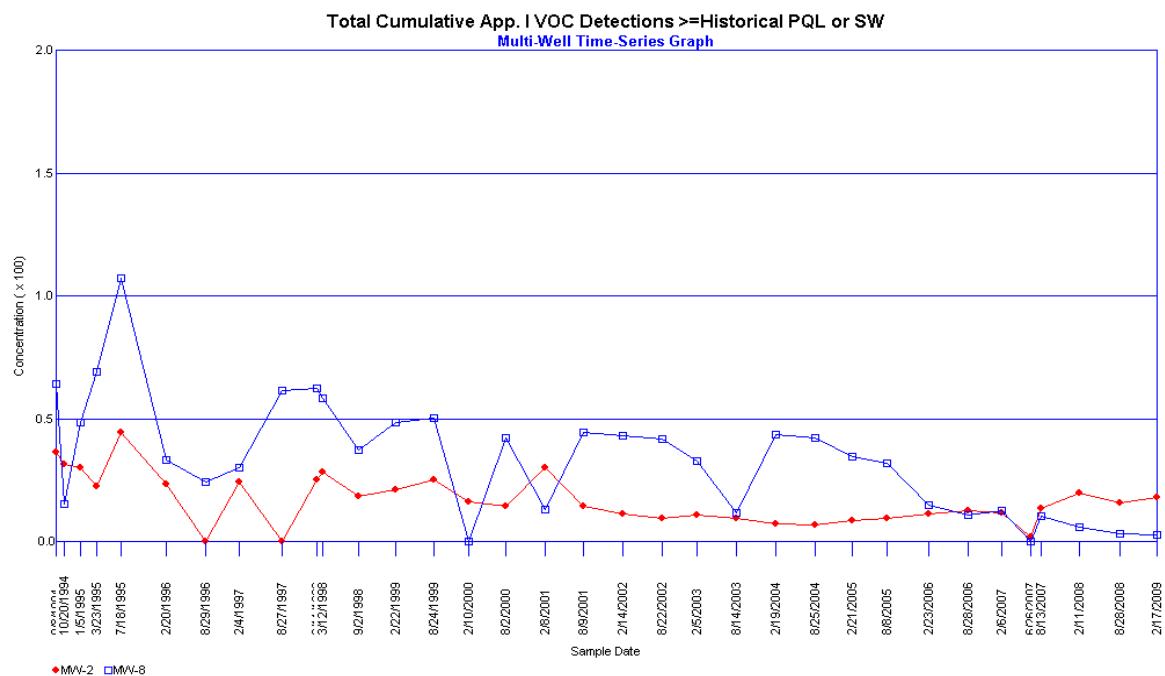
**Box Plots for Select Constituents (VOCs)**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**



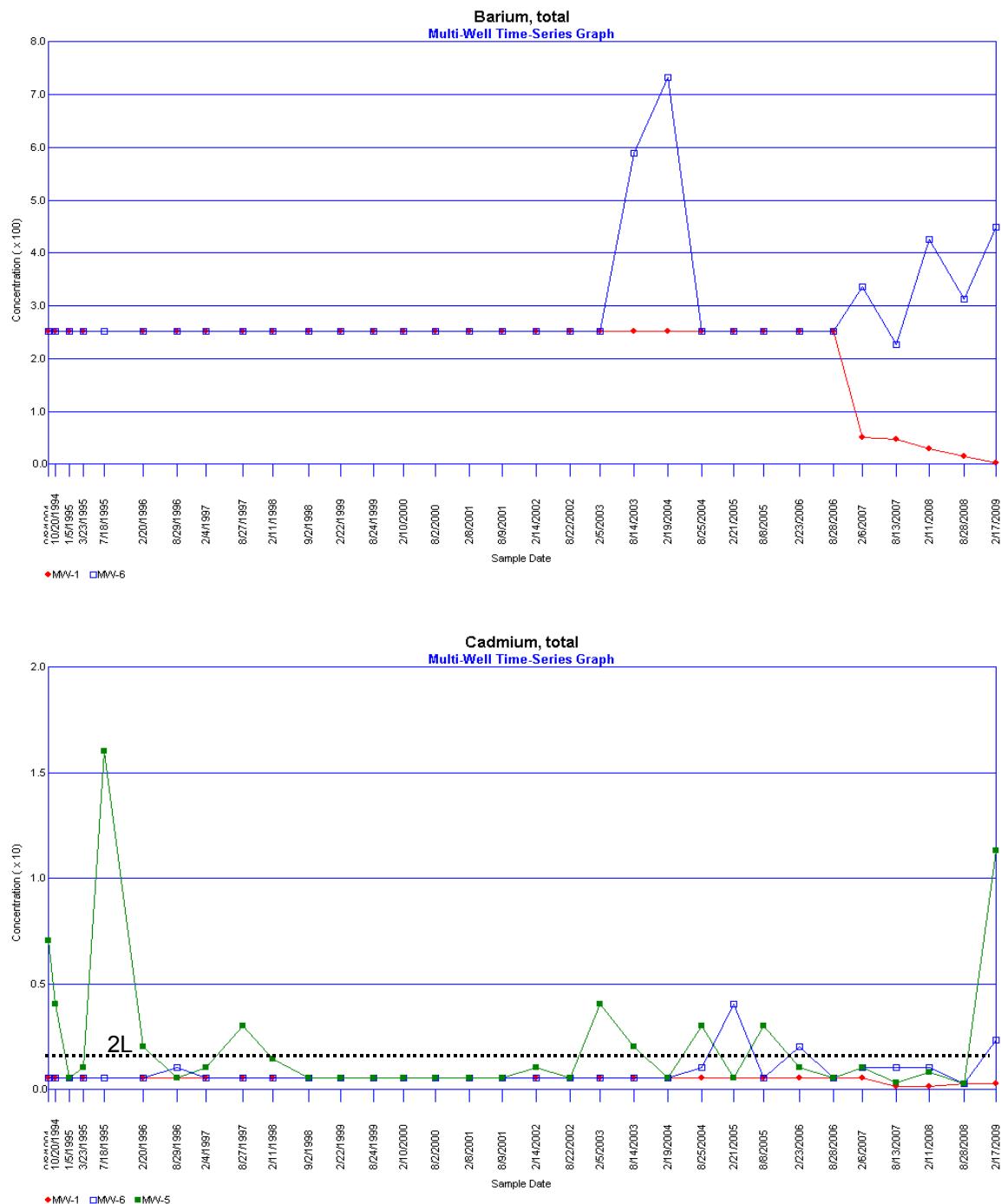
**Box Plots for Select Constituents (VOCs)**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**



**Time Series Plots for Total VOC Concentrations**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**

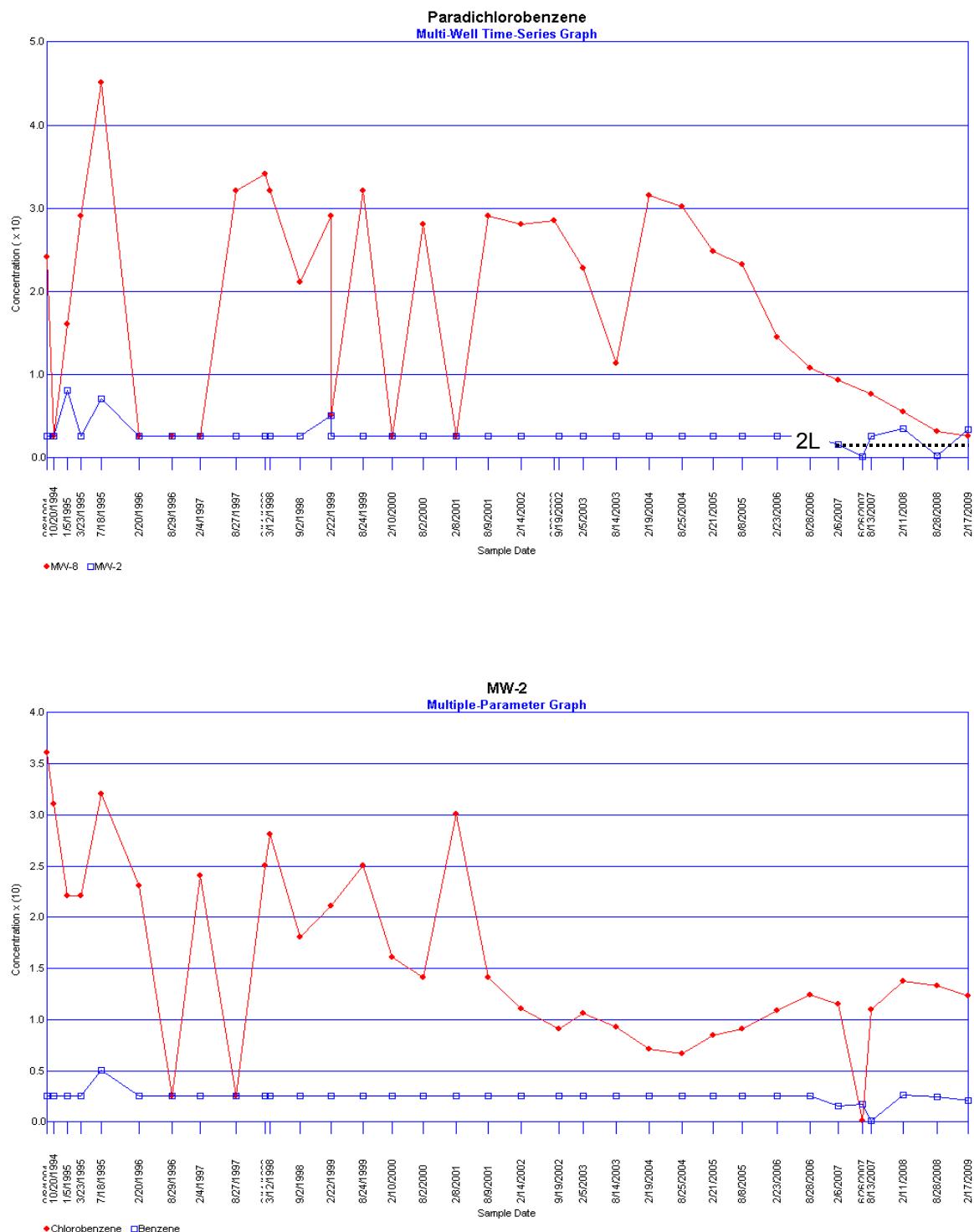


**Time Series Plots for Select Constituents (Metals)**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**



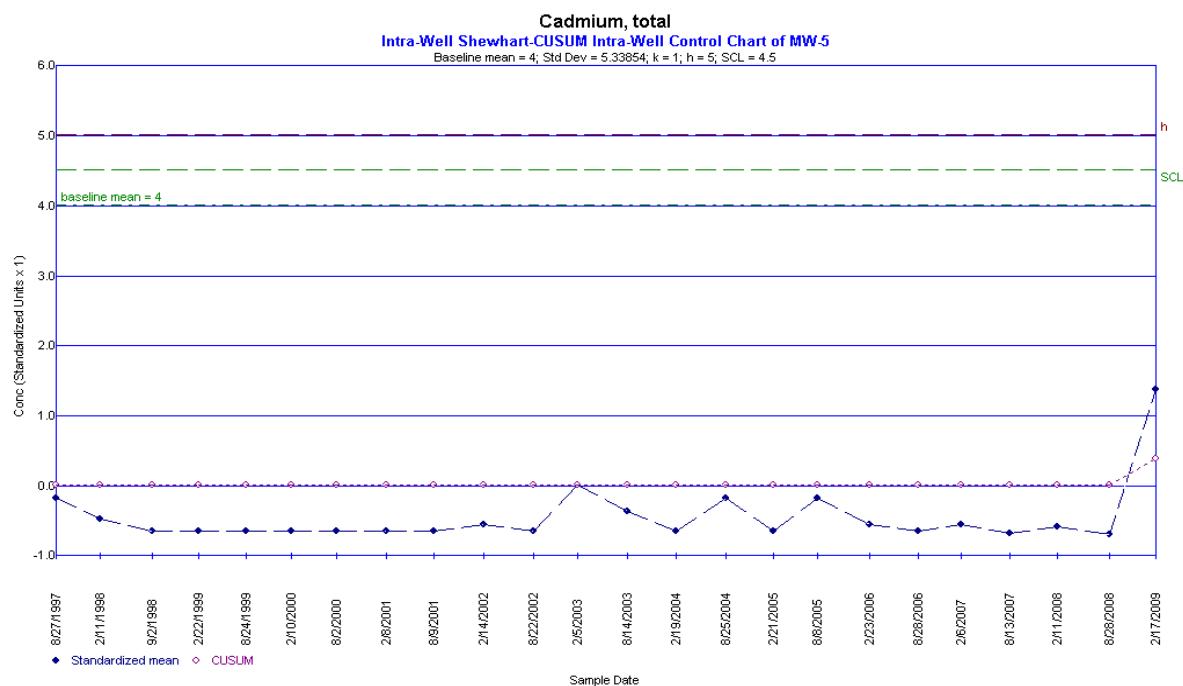
$\frac{1}{2}$  ND Substitution

**Time Series Plots for Select Constituents (VOCs)**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**



$\frac{1}{2}$  ND Substitution

**Shewhart-CUSUM charts for selected constituents**  
**Wayne County Closed MSWLF and Active C&D Landfill (Dudley)**



## Sampling Data Sheet



Project: Wayne Co Closed MSWLF & Active C&D LF, Dudley

Samplers: J. Pfohl P. 1 of 1

Monitoring Point	Sample Date	Sample Time	Sampling Parameters					Water Quality Parameters										
			Depth to Water (BTOP) Static	Lab Parameters to be analyzed for	Volume Purged (Gal)	Sample Type	Goes Dry During Purge	Comm ents	Total Depth	Cl- (mg/L)	DO (mg/L)	ORP	pH	Temp. °C	Specific Cond. (us/cm)	TDS (mg/L)	Turbidity	CH4 (ppm)
MW-1	2/17/09	1:35	15.91	MNA	8	PdP	Y		25	NR	9.9	210	6.1	17.8	30	10	C	NR
MW-2	2/17/09	3:00	4.90	MNA	9	PdP	Y	is turb	15	NR	1.1	200	7.0	13.3	1540	770	C	NR
MW-3	2/17/09	10:05	0.71	App. I	13	PdP	N		18	NR	0.1	160	6.2	17.5	40	30	C	NR
MW-4	2/17/09	9:30	7.06	App. I	10	PdP	N		15	NR	0.6	130	6.6	17.2	120	60	C	NR
MW-5	2/17/09	11:30	3.01	App. I	12	PdP	Y		18	NR	1.2	80	6.4	16.8	90	40	ST	NR
MW-6	2/17/09	10:30	5.73	App. I	12	PdP	N		18.14	NR	1.4	90	6.5	17.3	300	90	C	NR
MW-7	2/17/09	1:00	7.30	App. I	9	PdP	N		19	NR	2.5	130	6.2	14.7	0	0	C	NR
MW-8	2/17/09	2:05	19.37	MNA	9	PdP	N		29	NR	2.7	140	6.2	17.2	80	30	C	NR
SW-1	2/17/09	3:45	-	App. I	-	D <sub>DR</sub>	-		-	NR	8.1	360	6.8	13.6	30	10	C	NR
SW-2	NS	-	D <sub>DR</sub>	App. I	-	D <sub>DR</sub>	-		-	NR	-	-	-	-	-	-	-	NR
SW-3	NS	-	DR	App. I	-	DR	-		-	NR	-	-	-	-	-	-	-	NR
<hr/>																		
BB	2/15/09	9:00																
FB		9:10																
TB																		

### Comments

SS B=Stainless Steel Balter, D B=Disposable Balter, P=Low flow Pump, PD=Purged Dry

VT=Very Turbid, MT=Moderately Turbid, ST=Slightly Turbid, C=Clear

NR=No Reading Attempted, NS=No Sample Obtained

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**

Required Client Information:

Company: **Municipal Engineering Services (MESO)**  
Address: **PoBox 177**  
**Gilmer NC 27529**

Email to: **Jpfh@meso.com**  
Phone: **(919)773-5393** Fax: **(919)772-1176**

Requested Due Date/TAT: **Standard**

**Section B**

Required Project Information:

Report To: **Jonathan Pholl**  
Copy To:

Purchase Order No.:  
Project Name: **Wfne 6 - Closed WERC & Active C&D LF**  
Project Number:

**Section C**

Invoice Information:

Attention: **See Section A**  
Company Name:  
Address:  
Page Quote:  
Reference:  
Page Project Manager:  
Pace Profile #:

**Page:**

**1 of 1**

**1178828**

**REGULATORY AGENCY**

NPDES  GROUND WATER  DRINKING WATER  
 UST  RCRA  OTHER

**Site Location STATE: NC**

**Requested Analysis Filtered (Y/N)**

**Y/N**

**Preservatives**

**N**

**Residual Chlorine (Y/N)**

**N**

**Analysis Test**

**N**

**9238318**  
Pace Project No./Lab ID.

ITEM #	Section D Required Client Information	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Y/N	Requested Analysis Filtered (Y/N)
		DRINKING WATER	WATER	WASTE WATER	COMPOSITE						
1	MW-1	WT	WT	WT	COMPOSITE START	2/17/09 1:35	10 3 2 1 3 1	X X X X X X X X X X	82600 VOA's App I	N	
2	MW-2					3:00	10 3 2 1 3 1	X X X X X X X X X X	Total Metals		
3	MW-3					12:05	4	X X X X X X X X X X	Sulfide		
4	MW-4					9:30	4	X X X X X X X X X X	Nitrate		
5	MW-5					11:30	4	X X X X X X X X X X	Alkalinity/Sulfate		
6	MW-6					10:30	4	X X X X X X X X X X	TOC		
7	MW-7					11:00	4	X X X X X X X X X X	Ferric Iron (Fe <sup>3+</sup> )		
8	MW-8					2:05	10 3 2 1	X X X X X X X X X X			
9	SW-1					3:45	4	X X X X X X X X X X			
10											
11											
12											

ADDITIONAL COMMENTS				DATE	TIME	ACCEPTED BY AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
Preliminary for MNA parameters for				2/18/09	11:00	Rebonyne Inc NWS 11:00					
MW-1, MW-2, & MW-3				2/17/09	11:15	Rebonyne Inc 11:15	2/18/09	11:05	4:00	4	V
SW-2 & SW-3 - Dry											

**ORIGINAL**

Pace Analytical

**Sample Condition Upon Receipt**

Client Name: misco Project # 9238318

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used T060

Type of Ice: Wet Blue None  Samples on ice, cooling process has begun

Cooler Temperature 4.4

Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: MWD

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>MWD on on basis</u>
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	N/A	

Client Notification/ Resolution:

Field Data Required? Y / N / N/A

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review:

DLS

Date: 2/19/09

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Required Client Information:

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Section B

Required Project Information:

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Section C

Invoice Information:

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Section D

Required Client Information:

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ITEM #	Section A Required Client Information			Section B Required Project Information:			Section C Invoice Information:						
	Company: <b>Munizzi Engineering Services (MES)</b> Address: <b>Po Box 97</b>			Report To: <b>Southern Pkll</b> Copy To:			Attention: <b>See Section A</b> Company Name:						
<b>SAMPLE ID</b> (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE			Preservatives			REGULATORY AGENCY						
	Drinking Water Water Waste Water Product Soil/Solid Oil Air Tissue Other	DW WT WW P SL OL WP AR TS OT	(see valid codes to left)	COLLECTED	COMPOSITE START	COMPOSITE END/GRAB	NPDES	GROUND WATER	DRINKING WATER				
	MATERIAL CODE	SAMPLE TYPE	(G=GRAB C=COMP)	SAMPLE TEMP AT COLLECTION			# OF CONTAINERS	Y/N	Site Location	STATE: <b>NC</b>			
				DATE	TIME	DATE					TIME	Y/N	
				WT G	3/5/09	9:40					3		
				F B	↓	9:10					3		
				F B	↓	PAC F filer					3		
				4									
				5									
				6									
				7									
				8									
				9									
				10									
11													
12													
ADDITIONAL COMMENTS				RELINQUISHED BY / AFFILIATION			ACCEPTED BY / AFFILIATION			SAMPLE CONDITIONS			
Face DT H2O				Natalie Pace			D 10/10/09 1040			Temp in °C			
EB - Disporable Baker				Natalie Pace			D 10/10/09 1040			Received on Ice (Y/N)			
							3/10/09 1040			Custody Sealed Cooler (Y/N)			
							3/10/09 1040			Samples Intact (Y/N)			

ORIGINAL

SAMPLE NAME AND SIGNATURE

PRINT Name of SAMPLER:

Signature of SAMPLER:

## Sample Condition Upon Receipt

Client Name: Municipal Project # 9239600

Courier:  FedEx  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Optional	
Proj. Due Date	N/A
Proj. Name	N/A

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Thermometer Used T060

Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temperature 3.9

Biological Tissue is Frozen: Yes  No  N/A

Temp should be above freezing to 6°C

Comments: \_\_\_\_\_ Date and Initials of person examining contents: MF 3/10/09

Chain of Custody Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <i>Analyzing for all = B2H0</i> <i>No date/time for tb</i>
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	N/A	

### Client Notification/ Resolution:

Field Data Required? Y / N / N/A

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review:

BKM

Date: 3/10/09

# Basic Statistics

## Basic Statistics

### Parameter: Arsenic, total

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
291	
Total Non-Detects	246
Pooled Mean	5.959
Pooled Std Dev	4.63432
Background Mean	4.46452
Background Std Dev	1.25759

### Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total	
MW-1	31	29	93.5484	138.4	
Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	4.46452	1.25759	0	4082.5	131.694

### Compliance Wells

There are 9 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-7	33	24	72.7273	271.7		
MW-2	33	18	54.5455	303.1		
MW-6	32	29	90.625	152.1		
MW-5	32	27	84.375	206.9		
MW-4	32	30	93.75	149		
MW-3	32	28	87.5	187.3		
MW-8	32	28	87.5	168.6		
SW-1	17	16	94.1176	81.7		
EB	17	17	100	75.27		
Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-7	8.23333	8.85587	3.76882	1.10232	5418	164.182
MW-2	9.18485	5.11866	4.72033	1.10232	6318	191.455
MW-6	4.75312	2.01602	0.288609	1.11064	4348.5	135.891
MW-5	6.46562	6.35185	2.00111	1.11064	4699.5	146.859
MW-4	4.65625	1.00248	0.191734	1.11064	4213	131.656
MW-3	5.85312	3.52006	1.38861	1.11064	4550	142.188
MW-8	5.26875	1.98822	0.804234	1.11064	4508	140.875
SW-1	4.80588	2.57396	0.341366	1.33006	2249	132.294
EB	4.42765	1.61608	-0.0368691	1.33006	2099.5	123.5

### Analysis of Variance Statistics

SS Wells	770.465
SS Total	6228.31

### Kruskal-Wallis Statistics

Non-Detect Rank	123.5
Background Rank Sum	4082.5
Background Rank Mean	131.694
H Statistic	15.3113
H Adjusted for Ties	38.6766

## Basic Statistics

### Parameter: Barium, total

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
291	
Total Non-Detects	251
Pooled Mean	230.067
Pooled Std Dev	80.5978
Background Mean	214.1
Background Std Dev	83.5722

### Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total	
MW-1	31	28	90.3226	6637.1	
Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	214.1	83.5722	0	4300	138.71

### Compliance Wells

There are 9 compliance wells

Well	Samples	Non-Detects	% ND	Total		
SW-1	17	14	82.3529	3988.2		
MW-2	33	27	81.8182	7789		
MW-7	33	28	84.8485	7249.4		
MW-4	32	29	90.625	7067.6		
MW-3	32	29	90.625	7018.4		
MW-5	32	29	90.625	6943.5		
EB	17	15	88.2353	3555.2		
MW-8	32	27	84.375	7391		
MW-6	32	25	78.125	9310		
Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
SW-1	234.6	122.422	20.5	23.7002	2579	151.706
MW-2	236.03	31.5995	21.9303	19.6422	5079	153.909
MW-7	219.679	71.1071	5.57879	19.6422	4868	147.515
MW-4	220.863	71.1483	6.7625	19.7903	4457	139.281
MW-3	219.325	74.752	5.225	19.7903	4448	139
MW-5	216.984	78.343	2.88438	19.7903	4439	138.719
EB	209.129	91.5243	-4.97059	23.7002	2395	140.882
MW-8	230.969	45.1781	16.8688	19.7903	4761	148.781
MW-6	290.938	109.565	76.8375	19.7903	5160	161.25

### Analysis of Variance Statistics

SS Wells	150913
SS Total	1.88384e+006

### Kruskal-Wallis Statistics

Non-Detect Rank	126
Background Rank Sum	4300
Background Rank Mean	138.71
H Statistic	2.42691
H Adjusted for Ties	6.77363

## Basic Statistics

### Parameter: Cadmium, total

Original Data (Not Transformed)  
Non-Detects Replaced with 1/2 DL

	Total Observations
291	
Total Non-Detects	246
Pooled Mean	0.734639
Pooled Std Dev	1.33685
Background Mean	0.458065
Background Std Dev	0.114088

### Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total	
MW-1	31	29	93.5484	14.2	
Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	0.458065	0.114088	0	4076.5	131.5

### Compliance Wells

There are 9 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-7	33	30	90.9091	22.05		
MW-3	32	27	84.375	22.1		
EB	17	16	94.1176	7.63		
MW-2	33	31	93.9394	14.95		
MW-8	32	30	93.75	14.8		
MW-5	32	14	43.75	69.55		
MW-4	32	29	90.625	15.2		
SW-1	17	16	94.1176	8.25		
MW-6	32	24	75	25.05		
Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-7	0.668182	1.14023	0.210117	0.312911	4508	136.606
MW-3	0.690625	0.794379	0.23256	0.315271	4687.5	146.484
EB	0.448824	0.144995	-0.00924099	0.377559	2225	130.882
MW-2	0.45303	0.116552	-0.00503421	0.312911	4329.5	131.197
MW-8	0.4625	0.103175	0.00443548	0.315271	4214	131.688
MW-5	2.17344	3.40555	1.71537	0.315271	6682	208.813
MW-4	0.475	0.147561	0.0169355	0.315271	4355.5	136.109
SW-1	0.485294	0.164663	0.0272296	0.377559	2244	132
MW-6	0.782813	0.729406	0.324748	0.315271	5164	161.375

### Analysis of Variance Statistics

SS Wells	78.4876
SS Total	518.277

### Kruskal-Wallis Statistics

Non-Detect Rank	123.5
Background Rank Sum	4076.5
Background Rank Mean	131.5
H Statistic	23.6392
H Adjusted for Ties	59.7132

## Basic Statistics

### Parameter: Copper

Original Data (Not Transformed)  
Non-Detects Replaced with 1/2 DL

	Total Observations
291	
Total Non-Detects	272
Pooled Mean	84.0871
Pooled Std Dev	36.1192
Background Mean	84.3532
Background Std Dev	36.2874

### Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total	
MW-1	31	28	90.3226	2614.95	
Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	84.3532	36.2874	0	4670	150.645

### Compliance Wells

There are 9 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-4	32	30	93.75	2707.9		
MW-8	32	30	93.75	2710.1		
MW-7	33	31	93.9394	2710.9		
MW-5	32	31	96.875	2706.5		
MW-3	32	30	93.75	2718		
MW-6	32	30	93.75	2706.5		
EB	17	16	94.1176	1405.5		
MW-2	33	29	87.8788	2787.8		
SW-1	17	17	100	1401.2		
Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-4	84.6219	36.3145	0.268649	9.24363	4654	145.438
MW-8	84.6906	36.1531	0.337399	9.24363	4662	145.688
MW-7	82.1485	38.4633	-2.20474	9.17445	4799.5	145.439
MW-5	84.5781	36.4185	0.224899	9.24363	4509.5	140.922
MW-3	84.9375	35.5849	0.584274	9.24363	4672	146
MW-6	84.5781	36.4183	0.224899	9.24363	4644	145.125
EB	82.6765	38.5871	-1.67676	11.0699	2457	144.529
MW-2	84.4788	35.355	0.125562	9.17445	5097.5	154.47
SW-1	82.4235	39.1384	-1.9297	11.0699	2320.5	136.5

### Analysis of Variance Statistics

SS Wells	271.534
SS Total	378333

### Kruskal-Wallis Statistics

Non-Detect Rank	136.5
Background Rank Sum	4670
Background Rank Mean	150.645
H Statistic	0.773975
H Adjusted for Ties	4.22091

## Basic Statistics

### Parameter: Zinc, total

Original Data (Not Transformed)  
Non-Detects Replaced with 1/2 DL

	Total Observations
291	
Total Non-Detects	248
Pooled Mean	26.077
Pooled Std Dev	31.4557
Background Mean	29.7677
Background Std Dev	41.9713

### Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total	
MW-1	31	26	83.871	922.8	
Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	29.7677	41.9713	0	4582	147.806

### Compliance Wells

There are 9 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-2	33	28	84.8485	721.7		
MW-7	33	26	78.7879	785.5		
SW-1	17	15	88.2353	489.4		
MW-6	32	27	84.375	767.6		
MW-3	32	29	90.625	702.4		
MW-8	32	29	90.625	839.2		
MW-4	32	27	84.375	1122.9		
EB	17	16	94.1176	360.5		
MW-5	32	25	78.125	876.4		
Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-2	21.8697	7.33589	-7.89804	7.92218	4808	145.697
MW-7	23.803	11.7022	-5.96471	7.92218	5126	155.333
SW-1	28.7882	34.769	-0.979507	9.55889	2413.5	141.971
MW-6	23.9875	14.0634	-5.78024	7.98191	4708.5	147.141
MW-3	21.95	7.36688	-7.81774	7.98191	4415.5	137.984
MW-8	26.225	30.4817	-3.54274	7.98191	4421.5	138.172
MW-4	35.0906	70.8231	5.32288	7.98191	4717.5	147.422
EB	21.2059	8.51267	-8.56186	9.55889	2251	132.412
MW-5	27.3875	18.258	-2.38024	7.98191	5042.5	157.578

### Analysis of Variance Statistics

SS Wells	5045.64
SS Total	286943

### Kruskal-Wallis Statistics

Non-Detect Rank	124.5
Background Rank Sum	4582
Background Rank Mean	147.806
H Statistic	2.09105
H Adjusted for Ties	5.48798

## Basic Statistics

### Parameter: Chlorobenzene

Original Data (Not Transformed)  
Non-Detects Replaced with 1/2 DL

	Total Observations
323	
Total Non-Detects	248
Pooled Mean	5.30704
Pooled Std Dev	7.7999
Background Mean	2.1675
Background Std Dev	0.817098

### Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total	
MW-1	32	32	100	69.36	
Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.1675	0.817098	0	3984	124.5

### Compliance Wells

There are 11 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-8	33	4	12.1212	546.76		
MW-6	33	19	57.5758	152.695		
MW-3	33	33	100	71.86		
MW-4	33	32	96.9697	76.66		
MW-7	34	34	100	71.94		
MW-5	33	33	100	71.86		
MW-2	34	3	8.82353	541.28		
EB	19	19	100	36.86		
TB	19	19	100	36.86		
SW-1	18	18	100	37.81		
FB	2	2	100	0.23		
Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-8	16.5685	13.591	14.401	1.35586	8933	270.697
MW-6	4.62712	3.65801	2.45962	1.35586	6093.5	184.652
MW-3	2.17758	0.806309	0.0100758	1.35586	4108.5	124.5
MW-4	2.32303	1.2021	0.15553	1.35586	4246	128.667
MW-7	2.11588	0.871688	-0.0516176	1.34601	4233	124.5
MW-5	2.17758	0.806309	0.0100758	1.35586	4108.5	124.5
MW-2	15.92	9.15326	13.7525	1.34601	9398.5	276.426
EB	1.94	1.00765	-0.2275	1.58279	2365.5	124.5
TB	1.94	1.00765	-0.2275	1.58279	2365.5	124.5
SW-1	2.10056	0.919106	-0.0669444	1.61014	2241	124.5
FB	0.115	0	-2.0525	3.98327	249	124.5

### Analysis of Variance Statistics

SS Wells	10301.6
SS Total	19590

### Kruskal-Wallis Statistics

Non-Detect Rank	124.5
Background Rank Sum	3984
Background Rank Mean	124.5
H Statistic	132.537
H Adjusted for Ties	242.135

## Basic Statistics

### Parameter: Benzene

Original Data (Not Transformed)  
Non-Detects Replaced with 1/2 DL

	Total Observations
323	
Total Non-Detects	315
Pooled Mean	2.16573
Pooled Std Dev	0.860771
Background Mean	2.16906
Background Std Dev	0.812988

### Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total	
MW-1	32	32	100	69.41	
Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.16906	0.812988	0	5056	158

### Compliance Wells

There are 11 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-8	33	30	90.9091	75.85		
EB	19	19	100	36.91		
MW-3	33	33	100	71.91		
MW-4	33	33	100	71.91		
MW-5	33	33	100	71.91		
MW-6	33	33	100	71.91		
MW-2	34	29	85.2941	82.78		
FB	2	2	100	0.25		
TB	19	19	100	36.91		
SW-1	18	18	100	37.81		
MW-7	34	34	100	71.97		
Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-8	2.29848	1.01383	0.129422	0.211089	5696	172.606
EB	1.94263	1.00254	-0.226431	0.246419	3002	158
MW-3	2.17909	0.802255	0.0100284	0.211089	5214	158
MW-4	2.17909	0.802255	0.0100284	0.211089	5214	158
MW-5	2.17909	0.802255	0.0100284	0.211089	5214	158
MW-6	2.17909	0.802255	0.0100284	0.211089	5214	158
MW-2	2.43471	0.648342	0.265643	0.209555	6182	181.824
FB	0.125	0	-2.04406	0.620141	316	158
TB	1.94263	1.00254	-0.226431	0.246419	3002	158
SW-1	2.10056	0.91917	-0.0685069	0.250677	2844	158
MW-7	2.11676	0.869589	-0.0522978	0.209555	5372	158

### Analysis of Variance Statistics

SS Wells	13.4438
SS Total	238.578

### Kruskal-Wallis Statistics

Non-Detect Rank	158
Background Rank Sum	5056
Background Rank Mean	158
H Statistic	2.42738
H Adjusted for Ties	33.4909

## Basic Statistics

### Parameter: Paradichlorobenzene

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

	Total Observations
331	
Total Non-Detects	280
Pooled Mean	4.315
Pooled Std Dev	6.60255
Background Mean	2.25879
Background Std Dev	0.930498

### Background Wells

There is 1 background well

Well	Samples	Non-Detects	% ND	Total	
MW-1	33	33	100	74.54	
Well	Mean	Std Dev	Std Err	Rank Sum	Rank Mean
MW-1	2.25879	0.930498	0	4636.5	140.5

### Compliance Wells

There are 11 compliance wells

Well	Samples	Non-Detects	% ND	Total		
MW-6	34	16	47.0588	207.135		
MW-4	34	33	97.0588	83.54		
MW-5	34	34	100	77.04		
TB	19	19	100	37.04		
SW-1	18	18	100	37.905		
MW-3	34	34	100	77.04		
MW-2	35	30	85.7143	95.94		
EB	19	19	100	37.04		
FB	2	2	100	0.33		
MW-7	35	35	100	77.115		
MW-8	34	7	20.5882	623.6		
Well	Mean	Std Dev	Dif From Bkg	Std Err	Rank Sum	Rank Mean
MW-6	6.09221	5.30256	3.83342	1.10048	7631	224.441
MW-4	2.45706	1.47519	0.198271	1.10048	4935.5	145.162
MW-5	2.26588	0.917224	0.00709447	1.10048	4777	140.5
TB	1.94947	0.989332	-0.309314	1.2969	2669.5	140.5
SW-1	2.10583	0.907111	-0.152955	1.31957	2529	140.5
MW-3	2.26588	0.917224	0.00709447	1.10048	4777	140.5
MW-2	2.74114	1.41938	0.482355	1.0927	5656	161.6
EB	1.94947	0.989332	-0.309314	1.2969	2669.5	140.5
FB	0.165	0	-2.09379	3.27945	281	140.5
MW-7	2.20329	0.976575	-0.0555022	1.0927	4917.5	140.5
MW-8	18.3412	12.5968	16.0824	1.10048	9466.5	278.426

### Analysis of Variance Statistics

SS Wells	7916.45
SS Total	14385.9

### Kruskal-Wallis Statistics

Non-Detect Rank	140.5
Background Rank Sum	4636.5
Background Rank Mean	140.5
H Statistic	75.0696
H Adjusted for Ties	190.206

# Interwell Analyses for Metals

## Poisson Tolerance Limit

### Parameter: Arsenic, total

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Poisson Count of 31 background Samples = 273.6

Degrees of Freedom = 549

### 95% Confidence Values

Chi-Squared Value (95% Confidence) = 604.617

Lambda (from Zack's formula) = 9.75189

Smallest Degrees of Freedom = 32

Upper Tolerance Limit (95%) = 15

### 99% Confidence Values

Chi-Squared Value (99% Confidence) = 629.014

Lambda (from Zack's formula) = 10.1454

Smallest Degrees of Freedom = 38

Upper Tolerance Limit (99%) = 18

	Date	Result	Impacted 95%	Impacted 99%
MW-2	9/8/1994	ND<10	FALSE	FALSE
	10/20/1994	ND<10	FALSE	FALSE
	1/5/1995	ND<10	FALSE	FALSE
	3/23/1995	ND<10	FALSE	FALSE
	7/18/1995	ND<10	FALSE	FALSE
	2/20/1996	ND<10	FALSE	FALSE
	8/29/1996	ND<10	FALSE	FALSE
	2/4/1997	ND<10	FALSE	FALSE
	8/27/1997	ND<10	FALSE	FALSE
	2/11/1998	11	FALSE	FALSE
	9/2/1998	14	FALSE	FALSE
	2/22/1999	ND<10	FALSE	FALSE
	8/24/1999	ND<10	FALSE	FALSE
	2/10/2000	ND<10	FALSE	FALSE
	8/2/2000	10	FALSE	FALSE
	2/8/2001	ND<10	FALSE	FALSE
	8/9/2001	ND<10	FALSE	FALSE
	2/14/2002	ND<10	FALSE	FALSE
	8/22/2002	21	TRUE	TRUE
	2/5/2003	17	TRUE	FALSE
	8/14/2003	ND<10	FALSE	FALSE
	2/19/2004	ND<10	FALSE	FALSE
	8/25/2004	16	TRUE	FALSE
	2/21/2005	ND<10	FALSE	FALSE
	8/8/2005	16	TRUE	FALSE
	2/23/2006	12	FALSE	FALSE
	8/28/2006	16	TRUE	FALSE
	2/6/2007	11	FALSE	FALSE
	6/26/2007	10.7	FALSE	FALSE
	8/13/2007	17	TRUE	FALSE
	2/11/2008	11	FALSE	FALSE
	8/28/2008	16.9	TRUE	FALSE
	2/17/2009	13.5	FALSE	FALSE

## Non-Parametric Tolerance Interval

### Parameter: Barium, total

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 83.5938%

Background Samples (n) = 31

Maximum Background Concentration = 250

Minimum Coverage = 90.8%

Average Coverage = 96.875%

---

Well	Sample	Result	Impacted
MW-2	9/8/1994	ND<250	FALSE
MW-2	10/20/1994	ND<250	FALSE
MW-2	1/5/1995	ND<250	FALSE
MW-2	3/23/1995	ND<250	FALSE
MW-2	7/18/1995	ND<250	FALSE
MW-2	2/20/1996	ND<250	FALSE
MW-2	8/29/1996	ND<250	FALSE
MW-2	2/4/1997	ND<250	FALSE
MW-2	8/27/1997	ND<250	FALSE
MW-2	2/11/1998	ND<250	FALSE
MW-2	9/2/1998	ND<250	FALSE
MW-2	2/22/1999	ND<250	FALSE
MW-2	8/24/1999	ND<250	FALSE
MW-2	2/10/2000	ND<250	FALSE
MW-2	8/2/2000	ND<250	FALSE
MW-2	2/8/2001	ND<250	FALSE
MW-2	8/9/2001	ND<250	FALSE
MW-2	2/14/2002	ND<250	FALSE
MW-2	8/22/2002	ND<250	FALSE
MW-2	2/5/2003	ND<250	FALSE
MW-2	8/14/2003	ND<250	FALSE
MW-2	2/19/2004	ND<250	FALSE
MW-2	8/25/2004	ND<250	FALSE
MW-2	2/21/2005	ND<250	FALSE
MW-2	8/8/2005	ND<250	FALSE
MW-2	2/23/2006	ND<250	FALSE
MW-2	8/28/2006	ND<250	FALSE
MW-2	2/6/2007	147	FALSE
MW-2	6/26/2007	199	FALSE
MW-2	8/13/2007	192	FALSE
MW-2	2/11/2008	143	FALSE
MW-2	8/28/2008	167	FALSE
MW-2	2/17/2009	191	FALSE
<hr/>			
MW-8	9/8/1994	ND<250	FALSE
MW-8	10/20/1994	ND<250	FALSE
MW-8	1/5/1995	ND<250	FALSE
MW-8	3/23/1995	ND<250	FALSE
MW-8	7/18/1995	ND<250	FALSE
MW-8	2/20/1996	ND<250	FALSE
MW-8	8/29/1996	ND<250	FALSE
MW-8	2/4/1997	ND<250	FALSE
MW-8	8/27/1997	ND<250	FALSE
MW-8	2/11/1998	ND<250	FALSE
MW-8	9/2/1998	ND<250	FALSE
MW-8	2/22/1999	ND<250	FALSE
MW-8	8/24/1999	ND<250	FALSE
MW-8	2/10/2000	ND<250	FALSE
MW-8	8/2/2000	ND<250	FALSE
MW-8	2/8/2001	ND<250	FALSE
MW-8	8/9/2001	ND<250	FALSE
MW-8	2/14/2002	ND<250	FALSE
MW-8	8/22/2002	ND<250	FALSE
MW-8	2/5/2003	ND<250	FALSE
MW-8	8/14/2003	ND<250	FALSE
MW-8	2/19/2004	ND<250	FALSE
MW-8	8/25/2004	ND<250	FALSE
MW-8	2/21/2005	ND<250	FALSE
MW-8	8/8/2005	ND<250	FALSE
MW-8	2/23/2006	ND<250	FALSE
MW-8	8/28/2006	ND<250	FALSE
MW-8	2/6/2007	129	FALSE
MW-8	8/13/2007	128	FALSE
MW-8	2/11/2008	147	FALSE

## Wayne County Closed MSWLF and C&amp;D Landfill, Dudley

Barium, total

MW-8	8/28/2008	110	FALSE
MW-8	2/17/2009	127	FALSE
MW-6	9/8/1994	ND<250	FALSE
MW-6	10/20/1994	ND<250	FALSE
MW-6	1/5/1995	ND<250	FALSE
MW-6	3/23/1995	ND<250	FALSE
MW-6	7/18/1995	ND<250	FALSE
MW-6	2/20/1996	ND<250	FALSE
MW-6	8/29/1996	ND<250	FALSE
MW-6	2/4/1997	ND<250	FALSE
MW-6	8/27/1997	ND<250	FALSE
MW-6	2/11/1998	ND<250	FALSE
MW-6	9/2/1998	ND<250	FALSE
MW-6	2/22/1999	ND<250	FALSE
MW-6	8/24/1999	ND<250	FALSE
MW-6	2/10/2000	ND<250	FALSE
MW-6	8/2/2000	ND<250	FALSE
MW-6	2/8/2001	ND<250	FALSE
MW-6	8/9/2001	ND<250	FALSE
MW-6	2/14/2002	ND<250	FALSE
MW-6	8/22/2002	ND<250	FALSE
MW-6	2/5/2003	ND<250	FALSE
MW-6	8/14/2003	587	TRUE
MW-6	2/19/2004	731	TRUE
MW-6	8/25/2004	ND<250	FALSE
MW-6	2/21/2005	ND<250	FALSE
MW-6	8/8/2005	ND<250	FALSE
MW-6	2/23/2006	ND<250	FALSE
MW-6	8/28/2006	ND<250	FALSE
MW-6	2/6/2007	334	TRUE
MW-6	8/13/2007	225	FALSE
MW-6	2/11/2008	425	TRUE
MW-6	8/28/2008	311	TRUE
MW-6	2/17/2009	447	TRUE

## Poisson Tolerance Limit

### Parameter: Cadmium, total

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Poisson Count of 31 background Samples = 28.2

Degrees of Freedom = 58

### 95% Confidence Values

Chi-Squared Value (95% Confidence) = 76.7778

Lambda (from Zack's formula) = 1.23835

Smallest Degrees of Freedom = 8

Upper Tolerance Limit (95%) = 3

### 99% Confidence Values

Chi-Squared Value (99% Confidence) = 85.9501

Lambda (from Zack's formula) = 1.38629

Smallest Degrees of Freedom = 11

Upper Tolerance Limit (99%) = 4.5

	Date	Result	Impacted 95%	Impacted 99%
<b>MW-6</b>	9/8/1994	ND<1	FALSE	FALSE
	10/20/1994	ND<1	FALSE	FALSE
	1/5/1995	ND<1	FALSE	FALSE
	3/23/1995	ND<1	FALSE	FALSE
	7/18/1995	ND<1	FALSE	FALSE
	2/20/1996	ND<1	FALSE	FALSE
	8/29/1996	1	FALSE	FALSE
	2/4/1997	ND<1	FALSE	FALSE
	8/27/1997	ND<1	FALSE	FALSE
	2/11/1998	ND<1	FALSE	FALSE
	9/2/1998	ND<1	FALSE	FALSE
	2/22/1999	ND<1	FALSE	FALSE
	8/24/1999	ND<1	FALSE	FALSE
	2/10/2000	ND<1	FALSE	FALSE
	8/2/2000	ND<1	FALSE	FALSE
	2/8/2001	ND<1	FALSE	FALSE
	8/9/2001	ND<1	FALSE	FALSE
	2/14/2002	ND<1	FALSE	FALSE
	8/22/2002	ND<1	FALSE	FALSE
	2/5/2003	ND<1	FALSE	FALSE
	8/14/2003	ND<1	FALSE	FALSE
	2/19/2004	ND<1	FALSE	FALSE
	8/25/2004	1	FALSE	FALSE
	2/21/2005	4	TRUE	FALSE
	8/8/2005	ND<1	FALSE	FALSE
	2/23/2006	2	FALSE	FALSE
	8/28/2006	ND<1	FALSE	FALSE
	2/6/2007	1	FALSE	FALSE
	8/13/2007	1	FALSE	FALSE
	2/11/2008	1	FALSE	FALSE
	8/28/2008	ND<0.5	FALSE	FALSE
	2/17/2009	2.3	FALSE	FALSE
<b>MW-5</b>	9/8/1994	7	TRUE	TRUE
	10/20/1994	4	TRUE	FALSE
	1/5/1995	ND<1	FALSE	FALSE
	3/23/1995	1	FALSE	FALSE
	7/18/1995	16	TRUE	TRUE
	2/20/1996	2	FALSE	FALSE
	8/29/1996	ND<1	FALSE	FALSE
	2/4/1997	1	FALSE	FALSE
	8/27/1997	3	FALSE	FALSE
	2/11/1998	1.4	FALSE	FALSE
	9/2/1998	ND<1	FALSE	FALSE
	2/22/1999	ND<1	FALSE	FALSE
	8/24/1999	ND<1	FALSE	FALSE
	2/10/2000	ND<1	FALSE	FALSE
	8/2/2000	ND<1	FALSE	FALSE
	2/8/2001	ND<1	FALSE	FALSE
	8/9/2001	ND<1	FALSE	FALSE
	2/14/2002	1	FALSE	FALSE
	8/22/2002	ND<1	FALSE	FALSE
	2/5/2003	4	TRUE	FALSE
	8/14/2003	2	FALSE	FALSE
	2/19/2004	ND<1	FALSE	FALSE

## Wayne County Closed MSWLF and C&amp;D Landfill, Dudley

Cadmium, total

8/25/2004	3	FALSE	FALSE
2/21/2005	ND<1	FALSE	FALSE
8/8/2005	3	FALSE	FALSE
2/23/2006	1	FALSE	FALSE
8/28/2006	ND<1	FALSE	FALSE
2/6/2007	1	FALSE	FALSE
8/13/2007	0.3	FALSE	FALSE
2/11/2008	0.8	FALSE	FALSE
8/28/2008	ND<0.5	FALSE	FALSE
2/17/2009	11.3	TRUE	TRUE

## Non-Parametric Tolerance Interval

### Parameter: Copper

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 89.0625%

Background Samples (n) = 31

Maximum Background Concentration = 100

Minimum Coverage = 90.8%

Average Coverage = 96.875%

---

Well	Sample	Result	Impacted
MW-2	9/8/1994	ND<100	FALSE
MW-2	10/20/1994	ND<100	FALSE
MW-2	1/5/1995	ND<100	FALSE
MW-2	3/23/1995	ND<100	FALSE
MW-2	7/18/1995	ND<100	FALSE
MW-2	2/20/1996	ND<100	FALSE
MW-2	8/29/1996	ND<100	FALSE
MW-2	2/4/1997	ND<100	FALSE
MW-2	8/27/1997	ND<100	FALSE
MW-2	2/11/1998	ND<100	FALSE
MW-2	9/2/1998	ND<100	FALSE
MW-2	2/22/1999	ND<100	FALSE
MW-2	8/24/1999	ND<100	FALSE
MW-2	2/10/2000	ND<100	FALSE
MW-2	8/2/2000	ND<100	FALSE
MW-2	2/8/2001	ND<100	FALSE
MW-2	8/9/2001	ND<100	FALSE
MW-2	2/14/2002	ND<100	FALSE
MW-2	8/22/2002	ND<100	FALSE
MW-2	2/5/2003	ND<100	FALSE
MW-2	8/14/2003	ND<100	FALSE
MW-2	2/19/2004	ND<100	FALSE
MW-2	8/25/2004	ND<100	FALSE
MW-2	2/21/2005	ND<100	FALSE
MW-2	8/8/2005	ND<100	FALSE
MW-2	2/23/2006	ND<100	FALSE
MW-2	8/28/2006	ND<100	FALSE
MW-2	2/6/2007	ND<5	FALSE
MW-2	6/26/2007	ND<0.9	FALSE
MW-2	8/13/2007	0.6	FALSE
MW-2	2/11/2008	1.7	FALSE
MW-2	8/28/2008	5.8	FALSE
MW-2	2/17/2009	73.8	FALSE

---

## Non-Parametric Tolerance Interval

### Parameter: Zinc, total

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total Percent Non-Detects = 82.2917%

Background Samples (n) = 31

Maximum Background Concentration = 243

Minimum Coverage = 90.8%

Average Coverage = 96.875%

---

Well	Sample	Result	Impacted
MW-2	9/8/1994	ND<25	FALSE
MW-2	10/20/1994	ND<25	FALSE
MW-2	1/5/1995	ND<25	FALSE
MW-2	3/23/1995	ND<25	FALSE
MW-2	7/18/1995	ND<25	FALSE
MW-2	2/20/1996	ND<25	FALSE
MW-2	8/29/1996	ND<25	FALSE
MW-2	2/4/1997	ND<25	FALSE
MW-2	8/27/1997	ND<25	FALSE
MW-2	2/11/1998	ND<25	FALSE
MW-2	9/2/1998	ND<25	FALSE
MW-2	2/22/1999	ND<5	FALSE
MW-2	8/24/1999	ND<25	FALSE
MW-2	2/10/2000	ND<25	FALSE
MW-2	8/2/2000	ND<25	FALSE
MW-2	2/8/2001	ND<25	FALSE
MW-2	8/9/2001	ND<25	FALSE
MW-2	2/14/2002	ND<25	FALSE
MW-2	8/22/2002	ND<25	FALSE
MW-2	2/5/2003	ND<25	FALSE
MW-2	8/14/2003	ND<25	FALSE
MW-2	2/19/2004	ND<25	FALSE
MW-2	8/25/2004	ND<25	FALSE
MW-2	2/21/2005	ND<25	FALSE
MW-2	8/8/2005	ND<25	FALSE
MW-2	2/23/2006	ND<25	FALSE
MW-2	8/28/2006	ND<25	FALSE
MW-2	2/6/2007	ND<5	FALSE
MW-2	6/26/2007	15.4	FALSE
MW-2	8/13/2007	0.2	FALSE
MW-2	2/11/2008	2.5	FALSE
MW-2	8/28/2008	24.2	FALSE
MW-2	2/17/2009	19.4	FALSE
<hr/>			
MW-5	9/8/1994	72	FALSE
MW-5	10/20/1994	ND<25	FALSE
MW-5	1/5/1995	ND<25	FALSE
MW-5	3/23/1995	ND<25	FALSE
MW-5	7/18/1995	112	FALSE
MW-5	2/20/1996	ND<25	FALSE
MW-5	8/29/1996	ND<25	FALSE
MW-5	2/4/1997	ND<25	FALSE
MW-5	8/27/1997	ND<25	FALSE
MW-5	2/11/1998	ND<25	FALSE
MW-5	9/2/1998	ND<25	FALSE
MW-5	2/22/1999	ND<5	FALSE
MW-5	8/24/1999	ND<25	FALSE
MW-5	2/10/2000	ND<25	FALSE
MW-5	8/2/2000	ND<25	FALSE
MW-5	2/8/2001	ND<25	FALSE
MW-5	8/9/2001	ND<25	FALSE
MW-5	2/14/2002	ND<25	FALSE
MW-5	8/22/2002	ND<25	FALSE
MW-5	2/5/2003	ND<25	FALSE
MW-5	8/14/2003	ND<25	FALSE
MW-5	2/19/2004	ND<25	FALSE
MW-5	8/25/2004	ND<25	FALSE
MW-5	2/21/2005	ND<25	FALSE
MW-5	8/8/2005	ND<25	FALSE
MW-5	2/23/2006	ND<25	FALSE
MW-5	8/28/2006	ND<25	FALSE
MW-5	2/6/2007	19	FALSE
MW-5	8/13/2007	11	FALSE
MW-5	2/11/2008	20	FALSE

## Wayne County Closed MSWLF and C&amp;D Landfill, Dudley

Zinc, total

MW-5	8/28/2008	17.7	FALSE
MW-5	2/17/2009	19.7	FALSE

---

## Wilcoxon Non-Parametric Analysis (Intra-Well)

**Parameter: Barium, total**

**Well: MW-6**

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Total non detects is 25

Non detect rank is 13

---

### Wilcoxon Ranks

Group	Date	Result	Rank
Baseline Values	9/8/1994	ND<250	13
	10/20/1994	ND<250	13
	1/5/1995	ND<250	13
	3/23/1995	ND<250	13
Comparison Values	7/18/1995	ND<250	13
	2/20/1996	ND<250	13
	8/29/1996	ND<250	13
	2/4/1997	ND<250	13
	8/27/1997	ND<250	13
	2/11/1998	ND<250	13
	9/2/1998	ND<250	13
	2/22/1999	ND<250	13
	8/24/1999	ND<250	13
	2/10/2000	ND<250	13
	8/2/2000	ND<250	13
	2/8/2001	ND<250	13
	8/9/2001	ND<250	13
	2/14/2002	ND<250	13
	8/22/2002	ND<250	13
	2/5/2003	ND<250	13
	8/14/2003	587	31
	2/19/2004	731	32
	8/25/2004	ND<250	13
	2/21/2005	ND<250	13
	8/8/2005	ND<250	13
	2/23/2006	ND<250	13
	8/28/2006	ND<250	13
	2/6/2007	334	28
	8/13/2007	225	26
	2/11/2008	425	29
	8/28/2008	311	27
	2/17/2009	447	30

---

The Wilcoxon Statistic is 70

The Expected value is 56

The Standard Deviation is 17.5499

The Z Score is 0.769234

The Standard Deviation adjusted for ties is 17.5499

The Z Score adjusted for ties is 0.769234

0.769234 < 2.326 indicating no contamination at 1% significance level

1.0632 < 2.326 indicating no contamination at 1% significance level when adjusted for ties



## Laboratory Results

February 26, 2009

Mr. Jonathan Pfohl  
Municipal Engineering Services  
PO Box 97  
Garner, NC 27529

RE: Project: Wayne Co Closed & Active  
Pace Project No.: 9238318

Dear Mr. Pfohl:

Enclosed are the analytical results for sample(s) received by the laboratory on February 18, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Bonnie McKee

bonnie.mckee@pacelabs.com  
Project Manager

Enclosures

#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Wayne Co Closed & Active  
Pace Project No.: 9238318

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### Charlotte Certification IDs

West Virginia Certification #: 357  
Virginia Certification #: 00213  
Tennessee Certification #: 04010  
South Carolina Drinking Water Cert. #: 990060003  
South Carolina Certification #: 990060001  
Pennsylvania Certification #: 68-00784  
Connecticut Certification #: PH-0104

North Carolina Field Services Certification #: 5342  
North Carolina Drinking Water Certification #: 37706  
New Jersey Certification #: NC012  
Louisiana/LELAP Certification #: 04034  
Kentucky UST Certification #: 84  
Florida/NELAP Certification #: E87627  
North Carolina Wastewater Certification #: 12

### Asheville Certification IDs

West Virginia Certification #: 356  
Virginia Certification #: 00072  
Connecticut Certification #: PH-0106  
Florida/NELAP Certification #: E87648  
Tennessee Certification #: 2980  
South Carolina Certification #: 99030001  
South Carolina Bioassay Certification #: 99030002

Pennsylvania Certification #: 68-03578  
North Carolina Wastewater Certification #: 40  
North Carolina Drinking Water Certification #: 37712  
North Carolina Bioassay Certification #: 9  
New Jersey Certification #: NC011  
Massachusetts Certification #: M-NC030  
Louisiana/LELAP Certification #: 03095

### Eden Certification IDs

North Carolina Wastewater Certification #: 633  
Virginia Drinking Water Certification #: 00424

North Carolina Drinking Water Certification #: 37738

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9238318001	MW-1	Water	02/17/09 13:35	02/18/09 16:55
9238318002	MW-2	Water	02/17/09 15:00	02/18/09 16:55
9238318003	MW-8	Water	02/17/09 14:05	02/18/09 16:55
9238318004	MW-3	Water	02/17/09 12:05	02/18/09 16:55
9238318005	MW-4	Water	02/17/09 09:30	02/18/09 16:55
9238318006	MW-5	Water	02/17/09 11:30	02/18/09 16:55
9238318007	MW-6	Water	02/17/09 10:30	02/18/09 16:55
9238318008	MW-7	Water	02/17/09 13:00	02/18/09 16:55
9238318009	SW-1	Water	02/17/09 15:45	02/18/09 16:55

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: Wayne Co Closed & Active  
Pace Project No.: 9238318

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9238318001	MW-1	ASTM D516-90	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 6010	SHB	15	PASI-A
		EPA 8260	AW	54	PASI-C
		SM 2320B	TEE	1	PASI-A
		SM 3500-Fe D#4	JMW	1	PASI-A
		SM 4500-S2D	LEP	1	PASI-A
		SM 5310B	RAB	1	PASI-A
		ASTM D516-90	JDA	1	PASI-A
9238318002	MW-2	EPA 353.2	DMN	1	PASI-A
		EPA 6010	SHB	15	PASI-A
		EPA 8260	AW	54	PASI-C
		SM 2320B	TEE	1	PASI-A
		SM 3500-Fe D#4	JMW	1	PASI-A
		SM 4500-S2D	LEP	1	PASI-A
		SM 5310B	RAB	1	PASI-A
9238318003	MW-8	ASTM D516-90	JDA	1	PASI-A
		EPA 353.2	DMN	1	PASI-A
		EPA 6010	SHB	15	PASI-A
		EPA 8260	AW	54	PASI-C
		SM 2320B	TEE	1	PASI-A
		SM 3500-Fe D#4	JMW	1	PASI-A
		SM 4500-S2D	LEP	1	PASI-A
		SM 5310B	RAB	1	PASI-A
		EPA 6010	SHB	15	PASI-A
9238318004	MW-3	EPA 8260	AW	54	PASI-C
		ASTM D516-90	JDA	1	PASI-A
9238318005	MW-4	EPA 6010	SHB	15	PASI-A
		EPA 8260	AW	54	PASI-C
9238318006	MW-5	EPA 6010	SHB	15	PASI-A
		EPA 8260	AW	54	PASI-C
9238318007	MW-6	EPA 6010	SHB	15	PASI-A
		EPA 8260	AW	54	PASI-C
9238318008	MW-7	EPA 6010	SHB	15	PASI-A
		EPA 8260	AW	54	PASI-C
9238318009	SW-1	EPA 6010	SHB	15	PASI-A
		EPA 8260	AW	54	PASI-C

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: MW-1	Lab ID: 9238318001	Collected: 02/17/09 13:35	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND ug/L		6.0	2.6	1	02/24/09 12:50	02/24/09 22:02	7440-36-0	
Arsenic	ND ug/L		10.0	2.7	1	02/24/09 12:50	02/24/09 22:02	7440-38-2	
Barium	17.9J ug/L		100	0.20	1	02/24/09 12:50	02/24/09 22:02	7440-39-3	
Beryllium	ND ug/L		1.0	0.10	1	02/24/09 12:50	02/24/09 22:02	7440-41-7	
Cadmium	0.98J ug/L		1.0	0.50	1	02/24/09 12:50	02/24/09 22:02	7440-43-9	
Chromium	ND ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:02	7440-47-3	
Cobalt	ND ug/L		10.0	0.60	1	02/24/09 12:50	02/24/09 22:02	7440-48-4	
Copper	3.5J ug/L		10.0	0.30	1	02/24/09 12:50	02/24/09 22:02	7440-50-8	
Lead	ND ug/L		10.0	4.0	1	02/24/09 12:50	02/24/09 22:02	7439-92-1	
Nickel	ND ug/L		50.0	1.7	1	02/24/09 12:50	02/24/09 22:02	7440-02-0	
Selenium	ND ug/L		10.0	3.8	1	02/24/09 12:50	02/24/09 22:02	7782-49-2	
Silver	ND ug/L		10.0	0.10	1	02/24/09 12:50	02/24/09 22:02	7440-22-4	
Thallium	ND ug/L		5.5	3.0	1	02/24/09 12:50	02/24/09 22:02	7440-28-0	
Vanadium	0.68J ug/L		25.0	0.20	1	02/24/09 12:50	02/24/09 22:02	7440-62-2	
Zinc	ND ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:02	7440-66-6	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		02/21/09 23:44	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		02/21/09 23:44	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		02/21/09 23:44	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		02/21/09 23:44	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		02/21/09 23:44	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		02/21/09 23:44	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		02/21/09 23:44	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		02/21/09 23:44	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		02/21/09 23:44	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		02/21/09 23:44	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		02/21/09 23:44	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		02/21/09 23:44	75-00-3	
Chloroform	0.52J ug/L		5.0	0.14	1		02/21/09 23:44	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		02/21/09 23:44	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		02/21/09 23:44	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		02/21/09 23:44	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		02/21/09 23:44	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		02/21/09 23:44	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		02/21/09 23:44	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		02/21/09 23:44	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		02/21/09 23:44	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		02/21/09 23:44	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		02/21/09 23:44	107-06-2	
1,1-Dichloroethylene	ND ug/L		5.0	0.56	1		02/21/09 23:44	75-35-4	
cis-1,2-Dichloroethylene	ND ug/L		5.0	0.19	1		02/21/09 23:44	156-59-2	
trans-1,2-Dichloroethylene	ND ug/L		5.0	0.49	1		02/21/09 23:44	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		02/21/09 23:44	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		02/21/09 23:44	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		02/21/09 23:44	10061-01-5	

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: MW-1	Lab ID: 9238318001	Collected: 02/17/09 13:35	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/21/09 23:44	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/21/09 23:44	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		02/21/09 23:44	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		02/21/09 23:44	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		02/21/09 23:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		02/21/09 23:44	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		02/21/09 23:44	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		02/21/09 23:44	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		02/21/09 23:44	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/21/09 23:44	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/21/09 23:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/21/09 23:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/21/09 23:44	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/21/09 23:44	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/21/09 23:44	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/21/09 23:44	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		02/21/09 23:44	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/21/09 23:44	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		02/21/09 23:44	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/21/09 23:44	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		02/21/09 23:44	95-47-6	
4-Bromofluorobenzene (S)	97 %		87-109		1		02/21/09 23:44	460-00-4	
Dibromofluoromethane (S)	104 %		85-115		1		02/21/09 23:44	1868-53-7	
1,2-Dichloroethane-d4 (S)	103 %		79-120		1		02/21/09 23:44	17060-07-0	
Toluene-d8 (S)	100 %		70-120		1		02/21/09 23:44	2037-26-5	
<b>2320B Alkalinity</b>		Analytical Method: SM 2320B							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		02/24/09 19:00		
<b>Iron, Ferrous</b>		Analytical Method: SM 3500-Fe D#4							
Iron, Ferrous	ND	mg/L	0.50	0.50	1		02/25/09 11:02		H3
<b>4500S2D Sulfide Water</b>		Analytical Method: SM 4500-S2D							
Sulfide	0.25	mg/L	0.10	0.10	1		02/23/09 13:43		
<b>353.2 Nitrogen, NO2/NO3 unpres</b>		Analytical Method: EPA 353.2							
Nitrogen, Nitrate	353	ug/L	100	100	1		02/18/09 23:10		
<b>5310B TOC</b>		Analytical Method: SM 5310B							
Total Organic Carbon	2.4	mg/L	1.0	1.0	1		02/20/09 10:00	7440-44-0	
<b>ASTM D516-90 Sulfate Water</b>		Analytical Method: ASTM D516-90							
Sulfate	ND	ug/L	5000	5000	1		02/20/09 11:04	14808-79-8	

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: MW-2	Lab ID: 9238318002	Collected: 02/17/09 15:00	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 ICP Groundwater</b>	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Antimony	ND ug/L		6.0	2.6	1	02/24/09 12:50	02/24/09 22:06	7440-36-0	
Arsenic	<b>13.5</b> ug/L		10.0	2.7	1	02/24/09 12:50	02/24/09 22:06	7440-38-2	
Barium	<b>191</b> ug/L		100	0.20	1	02/24/09 12:50	02/24/09 22:06	7440-39-3	
Beryllium	ND ug/L		1.0	0.10	1	02/24/09 12:50	02/24/09 22:06	7440-41-7	
Cadmium	ND ug/L		1.0	0.50	1	02/24/09 12:50	02/24/09 22:06	7440-43-9	
Chromium	<b>3.7J</b> ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:06	7440-47-3	
Cobalt	<b>4.2J</b> ug/L		10.0	0.60	1	02/24/09 12:50	02/24/09 22:06	7440-48-4	
Copper	<b>73.8</b> ug/L		10.0	0.30	1	02/24/09 12:50	02/24/09 22:06	7440-50-8	
Lead	ND ug/L		10.0	4.0	1	02/24/09 12:50	02/24/09 22:06	7439-92-1	
Nickel	<b>1.7J</b> ug/L		50.0	1.7	1	02/24/09 12:50	02/24/09 22:06	7440-02-0	
Selenium	<b>4.8J</b> ug/L		10.0	3.8	1	02/24/09 12:50	02/24/09 22:06	7782-49-2	
Silver	<b>0.70J</b> ug/L		10.0	0.10	1	02/24/09 12:50	02/24/09 22:06	7440-22-4	
Thallium	ND ug/L		5.5	3.0	1	02/24/09 12:50	02/24/09 22:06	7440-28-0	
Vanadium	<b>9.2J</b> ug/L		25.0	0.20	1	02/24/09 12:50	02/24/09 22:06	7440-62-2	
Zinc	<b>19.4</b> ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:06	7440-66-6	
<b>8260 MSV Low Level</b>	Analytical Method: EPA 8260								
Acetone	ND ug/L		100	2.2	1		02/22/09 00:07	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		02/22/09 00:07	107-13-1	
Benzene	<b>2.0</b> ug/L		1.0	0.25	1		02/22/09 00:07	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		02/22/09 00:07	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		02/22/09 00:07	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		02/22/09 00:07	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		02/22/09 00:07	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		02/22/09 00:07	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		02/22/09 00:07	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		02/22/09 00:07	56-23-5	
Chlorobenzene	<b>12.2</b> ug/L		3.0	0.23	1		02/22/09 00:07	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		02/22/09 00:07	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		02/22/09 00:07	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		02/22/09 00:07	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		02/22/09 00:07	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		02/22/09 00:07	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		02/22/09 00:07	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		02/22/09 00:07	74-95-3	
1,2-Dichlorobenzene	<b>0.36J</b> ug/L		5.0	0.30	1		02/22/09 00:07	95-50-1	
1,4-Dichlorobenzene	<b>3.3</b> ug/L		1.0	0.33	1		02/22/09 00:07	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		02/22/09 00:07	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		02/22/09 00:07	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		02/22/09 00:07	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		02/22/09 00:07	75-35-4	
cis-1,2-Dichloroethene	<b>0.29J</b> ug/L		5.0	0.19	1		02/22/09 00:07	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		02/22/09 00:07	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		02/22/09 00:07	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		02/22/09 00:07	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		02/22/09 00:07	10061-01-5	

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## ANALYTICAL RESULTS

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

<b>Sample: MW-2</b>		<b>Lab ID: 9238318002</b>		Collected: 02/17/09 15:00		Received: 02/18/09 16:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.26	1		02/22/09 00:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.30	1		02/22/09 00:07	100-41-4	
2-Hexanone	ND	ug/L	50.0	0.46	1		02/22/09 00:07	591-78-6	
Iodomethane	ND	ug/L	10.0	0.32	1		02/22/09 00:07	74-88-4	
Methylene Chloride	ND	ug/L	2.0	0.97	1		02/22/09 00:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	0.33	1		02/22/09 00:07	108-10-1	
Styrene	ND	ug/L	1.0	0.26	1		02/22/09 00:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	0.33	1		02/22/09 00:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	3.0	0.40	1		02/22/09 00:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.46	1		02/22/09 00:07	127-18-4	
Toluene	ND	ug/L	1.0	0.26	1		02/22/09 00:07	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.48	1		02/22/09 00:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.29	1		02/22/09 00:07	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.47	1		02/22/09 00:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.20	1		02/22/09 00:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.41	1		02/22/09 00:07	96-18-4	
Vinyl acetate	ND	ug/L	50.0	0.35	1		02/22/09 00:07	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.62	1		02/22/09 00:07	75-01-4	
Xylene (Total)	ND	ug/L	5.0	0.66	1		02/22/09 00:07	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		02/22/09 00:07	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.23	1		02/22/09 00:07	95-47-6	
4-Bromofluorobenzene (S)	98 %		87-109		1		02/22/09 00:07	460-00-4	
Dibromofluoromethane (S)	103 %		85-115		1		02/22/09 00:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	104 %		79-120		1		02/22/09 00:07	17060-07-0	
Toluene-d8 (S)	99 %		70-120		1		02/22/09 00:07	2037-26-5	
<b>2320B Alkalinity</b>	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	508	mg/L	5.0	5.0	1		02/24/09 19:00		
<b>Iron, Ferrous</b>	Analytical Method: SM 3500-Fe D#4								
Iron, Ferrous	2.7	mg/L	2.0	2.0	4		02/25/09 11:30		H3
<b>4500S2D Sulfide Water</b>	Analytical Method: SM 4500-S2D								
Sulfide	ND	mg/L	0.10	0.10	1		02/23/09 13:44		
<b>353.2 Nitrogen, NO2/NO3 unpres</b>	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	ND	ug/L	100	100	1		02/18/09 23:10		
<b>5310B TOC</b>	Analytical Method: SM 5310B								
Total Organic Carbon	41.2	mg/L	5.0	5.0	5		02/20/09 10:00	7440-44-0	
<b>ASTM D516-90 Sulfate Water</b>	Analytical Method: ASTM D516-90								
Sulfate	14500	ug/L	5000	5000	1		02/20/09 11:04	14808-79-8	

Date: 02/26/2009 11:22 AM

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: MW-8	Lab ID: 9238318003	Collected: 02/17/09 14:05	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND ug/L		6.0	2.6	1	02/24/09 12:50	02/24/09 22:10	7440-36-0	
Arsenic	ND ug/L		10.0	2.7	1	02/24/09 12:50	02/24/09 22:10	7440-38-2	
Barium	127 ug/L		100	0.20	1	02/24/09 12:50	02/24/09 22:10	7440-39-3	
Beryllium	ND ug/L		1.0	0.10	1	02/24/09 12:50	02/24/09 22:10	7440-41-7	
Cadmium	ND ug/L		1.0	0.50	1	02/24/09 12:50	02/24/09 22:10	7440-43-9	
Chromium	ND ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:10	7440-47-3	
Cobalt	0.79J ug/L		10.0	0.60	1	02/24/09 12:50	02/24/09 22:10	7440-48-4	
Copper	1.0J ug/L		10.0	0.30	1	02/24/09 12:50	02/24/09 22:10	7440-50-8	
Lead	ND ug/L		10.0	4.0	1	02/24/09 12:50	02/24/09 22:10	7439-92-1	
Nickel	ND ug/L		50.0	1.7	1	02/24/09 12:50	02/24/09 22:10	7440-02-0	
Selenium	ND ug/L		10.0	3.8	1	02/24/09 12:50	02/24/09 22:10	7782-49-2	
Silver	ND ug/L		10.0	0.10	1	02/24/09 12:50	02/24/09 22:10	7440-22-4	
Thallium	ND ug/L		5.5	3.0	1	02/24/09 12:50	02/24/09 22:10	7440-28-0	
Vanadium	ND ug/L		25.0	0.20	1	02/24/09 12:50	02/24/09 22:10	7440-62-2	
Zinc	ND ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:10	7440-66-6	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		02/22/09 00:31	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		02/22/09 00:31	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		02/22/09 00:31	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		02/22/09 00:31	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		02/22/09 00:31	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		02/22/09 00:31	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		02/22/09 00:31	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		02/22/09 00:31	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		02/22/09 00:31	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		02/22/09 00:31	56-23-5	
Chlorobenzene	0.65J ug/L		3.0	0.23	1		02/22/09 00:31	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		02/22/09 00:31	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		02/22/09 00:31	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		02/22/09 00:31	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		02/22/09 00:31	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		02/22/09 00:31	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		02/22/09 00:31	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		02/22/09 00:31	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		02/22/09 00:31	95-50-1	
1,4-Dichlorobenzene	2.5 ug/L		1.0	0.33	1		02/22/09 00:31	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		02/22/09 00:31	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		02/22/09 00:31	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		02/22/09 00:31	107-06-2	
1,1-Dichloroethylene	ND ug/L		5.0	0.56	1		02/22/09 00:31	75-35-4	
cis-1,2-Dichloroethylene	ND ug/L		5.0	0.19	1		02/22/09 00:31	156-59-2	
trans-1,2-Dichloroethylene	ND ug/L		5.0	0.49	1		02/22/09 00:31	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		02/22/09 00:31	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		02/22/09 00:31	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		02/22/09 00:31	10061-01-5	

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: MW-8	Lab ID: 9238318003	Collected:	02/17/09 14:05	Received:	02/18/09 16:55	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		02/22/09 00:31	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		02/22/09 00:31	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		02/22/09 00:31	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		02/22/09 00:31	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		02/22/09 00:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		02/22/09 00:31	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		02/22/09 00:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		02/22/09 00:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		02/22/09 00:31	79-34-5	
Tetrachloroethylene	ND ug/L		1.0	0.46	1		02/22/09 00:31	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		02/22/09 00:31	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		02/22/09 00:31	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		02/22/09 00:31	79-00-5	
Trichloroethylene	ND ug/L		1.0	0.47	1		02/22/09 00:31	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		02/22/09 00:31	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		02/22/09 00:31	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		02/22/09 00:31	108-05-4	
Vinyl chloride	ND ug/L		1.0	0.62	1		02/22/09 00:31	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		02/22/09 00:31	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		02/22/09 00:31	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		02/22/09 00:31	95-47-6	
4-Bromofluorobenzene (S)	100 %		87-109		1		02/22/09 00:31	460-00-4	
Dibromofluoromethane (S)	104 %		85-115		1		02/22/09 00:31	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		79-120		1		02/22/09 00:31	17060-07-0	
Toluene-d8 (S)	100 %		70-120		1		02/22/09 00:31	2037-26-5	
<b>2320B Alkalinity</b>	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	ND mg/L		5.0	5.0	1		02/24/09 19:00		
<b>Iron, Ferrous</b>	Analytical Method: SM 3500-Fe D#4								
Iron, Ferrous	ND mg/L		0.50	0.50	1		02/25/09 11:06		H3
<b>4500S2D Sulfide Water</b>	Analytical Method: SM 4500-S2D								
Sulfide	0.17 mg/L		0.10	0.10	1		02/23/09 13:48		
<b>353.2 Nitrogen, NO2/NO3 unpres</b>	Analytical Method: EPA 353.2								
Nitrogen, Nitrate	489 ug/L		100	100	1		02/18/09 23:10		
<b>5310B TOC</b>	Analytical Method: SM 5310B								
Total Organic Carbon	23.7 mg/L		1.0	1.0	1		02/20/09 10:00	7440-44-0	
<b>ASTM D516-90 Sulfate Water</b>	Analytical Method: ASTM D516-90								
Sulfate	ND ug/L		5000	5000	1		02/20/09 11:04	14808-79-8	

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## ANALYTICAL RESULTS

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

Sample: MW-3		Lab ID: 9238318004		Collected: 02/17/09 12:05		Received: 02/18/09 16:55		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND ug/L		6.0	2.6	1	02/24/09 12:50	02/24/09 22:24	7440-36-0	
Arsenic	ND ug/L		10.0	2.7	1	02/24/09 12:50	02/24/09 22:24	7440-38-2	
Barium	18.3J ug/L		100	0.20	1	02/24/09 12:50	02/24/09 22:24	7440-39-3	
Beryllium	ND ug/L		1.0	0.10	1	02/24/09 12:50	02/24/09 22:24	7440-41-7	
Cadmium	ND ug/L		1.0	0.50	1	02/24/09 12:50	02/24/09 22:24	7440-43-9	
Chromium	ND ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:24	7440-47-3	
Cobalt	ND ug/L		10.0	0.60	1	02/24/09 12:50	02/24/09 22:24	7440-48-4	
Copper	1.3J ug/L		10.0	0.30	1	02/24/09 12:50	02/24/09 22:24	7440-50-8	
Lead	ND ug/L		10.0	4.0	1	02/24/09 12:50	02/24/09 22:24	7439-92-1	
Nickel	ND ug/L		50.0	1.7	1	02/24/09 12:50	02/24/09 22:24	7440-02-0	
Selenium	ND ug/L		10.0	3.8	1	02/24/09 12:50	02/24/09 22:24	7782-49-2	
Silver	ND ug/L		10.0	0.10	1	02/24/09 12:50	02/24/09 22:24	7440-22-4	
Thallium	ND ug/L		5.5	3.0	1	02/24/09 12:50	02/24/09 22:24	7440-28-0	
Vanadium	2.6J ug/L		25.0	0.20	1	02/24/09 12:50	02/24/09 22:24	7440-62-2	
Zinc	1.3J ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:24	7440-66-6	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		02/22/09 00:55	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		02/22/09 00:55	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		02/22/09 00:55	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		02/22/09 00:55	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		02/22/09 00:55	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		02/22/09 00:55	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		02/22/09 00:55	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		02/22/09 00:55	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		02/22/09 00:55	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		02/22/09 00:55	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		02/22/09 00:55	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		02/22/09 00:55	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		02/22/09 00:55	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		02/22/09 00:55	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		02/22/09 00:55	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		02/22/09 00:55	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		02/22/09 00:55	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		02/22/09 00:55	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		02/22/09 00:55	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		02/22/09 00:55	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		02/22/09 00:55	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		02/22/09 00:55	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		02/22/09 00:55	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		02/22/09 00:55	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.19	1		02/22/09 00:55	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		02/22/09 00:55	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		02/22/09 00:55	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		02/22/09 00:55	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		02/22/09 00:55	10061-01-5	

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active  
Pace Project No.: 9238318

Sample: MW-3	Lab ID: 9238318004	Collected: 02/17/09 12:05	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		02/22/09 00:55	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		02/22/09 00:55	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		02/22/09 00:55	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		02/22/09 00:55	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		02/22/09 00:55	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		02/22/09 00:55	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		02/22/09 00:55	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		02/22/09 00:55	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		02/22/09 00:55	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		02/22/09 00:55	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		02/22/09 00:55	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		02/22/09 00:55	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		02/22/09 00:55	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		02/22/09 00:55	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		02/22/09 00:55	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		02/22/09 00:55	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		02/22/09 00:55	108-05-4	
Vinyl chloride	ND ug/L		1.0	0.62	1		02/22/09 00:55	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		02/22/09 00:55	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		02/22/09 00:55	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		02/22/09 00:55	95-47-6	
4-Bromofluorobenzene (S)	97 %		87-109		1		02/22/09 00:55	460-00-4	
Dibromofluoromethane (S)	105 %		85-115		1		02/22/09 00:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	106 %		79-120		1		02/22/09 00:55	17060-07-0	
Toluene-d8 (S)	100 %		70-120		1		02/22/09 00:55	2037-26-5	

## ANALYTICAL RESULTS

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

<b>Sample: MW-4</b>		<b>Lab ID: 9238318005</b>		Collected: 02/17/09 09:30		Received: 02/18/09 16:55		Matrix: Water			
Parameters	Results	Units	Report Limit		MDL	DF	Prepared	Analyzed	CAS No.	Qual	
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010									
Antimony	ND ug/L	ug/L	6.0	2.6	1	02/24/09 12:50	02/24/09 22:28	7440-36-0			
Arsenic	ND ug/L	ug/L	10.0	2.7	1	02/24/09 12:50	02/24/09 22:28	7440-38-2			
Barium	<b>70.1J</b> ug/L	ug/L	100	0.20	1	02/24/09 12:50	02/24/09 22:28	7440-39-3			
Beryllium	ND ug/L	ug/L	1.0	0.10	1	02/24/09 12:50	02/24/09 22:28	7440-41-7			
Cadmium	ND ug/L	ug/L	1.0	0.50	1	02/24/09 12:50	02/24/09 22:28	7440-43-9			
Chromium	ND ug/L	ug/L	10.0	0.40	1	02/24/09 12:50	02/24/09 22:28	7440-47-3			
Cobalt	ND ug/L	ug/L	10.0	0.60	1	02/24/09 12:50	02/24/09 22:28	7440-48-4			
Copper	<b>2.1J</b> ug/L	ug/L	10.0	0.30	1	02/24/09 12:50	02/24/09 22:28	7440-50-8			
Lead	ND ug/L	ug/L	10.0	4.0	1	02/24/09 12:50	02/24/09 22:28	7439-92-1			
Nickel	ND ug/L	ug/L	50.0	1.7	1	02/24/09 12:50	02/24/09 22:28	7440-02-0			
Selenium	ND ug/L	ug/L	10.0	3.8	1	02/24/09 12:50	02/24/09 22:28	7782-49-2			
Silver	ND ug/L	ug/L	10.0	0.10	1	02/24/09 12:50	02/24/09 22:28	7440-22-4			
Thallium	ND ug/L	ug/L	5.5	3.0	1	02/24/09 12:50	02/24/09 22:28	7440-28-0			
Vanadium	<b>0.53J</b> ug/L	ug/L	25.0	0.20	1	02/24/09 12:50	02/24/09 22:28	7440-62-2			
Zinc	ND ug/L	ug/L	10.0	0.40	1	02/24/09 12:50	02/24/09 22:28	7440-66-6			
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260									
Acetone	ND ug/L	ug/L	100	2.2	1			02/22/09 01:19	67-64-1		
Acrylonitrile	ND ug/L	ug/L	200	1.9	1			02/22/09 01:19	107-13-1		
Benzene	ND ug/L	ug/L	1.0	0.25	1			02/22/09 01:19	71-43-2		
Bromochloromethane	ND ug/L	ug/L	3.0	0.17	1			02/22/09 01:19	74-97-5		
Bromodichloromethane	ND ug/L	ug/L	1.0	0.18	1			02/22/09 01:19	75-27-4		
Bromoform	ND ug/L	ug/L	3.0	0.26	1			02/22/09 01:19	75-25-2		
Bromomethane	ND ug/L	ug/L	10.0	0.29	1			02/22/09 01:19	74-83-9		
2-Butanone (MEK)	ND ug/L	ug/L	100	0.96	1			02/22/09 01:19	78-93-3		
Carbon disulfide	ND ug/L	ug/L	100	1.2	1			02/22/09 01:19	75-15-0		
Carbon tetrachloride	ND ug/L	ug/L	1.0	0.25	1			02/22/09 01:19	56-23-5		
Chlorobenzene	ND ug/L	ug/L	3.0	0.23	1			02/22/09 01:19	108-90-7		
Chloroethane	ND ug/L	ug/L	10.0	0.54	1			02/22/09 01:19	75-00-3		
Chloroform	<b>0.21J</b> ug/L	ug/L	5.0	0.14	1			02/22/09 01:19	67-66-3		
Chloromethane	ND ug/L	ug/L	1.0	0.11	1			02/22/09 01:19	74-87-3		
1,2-Dibromo-3-chloropropane	ND ug/L	ug/L	13.0	2.5	1			02/22/09 01:19	96-12-8		
Dibromochloromethane	ND ug/L	ug/L	3.0	0.21	1			02/22/09 01:19	124-48-1		
1,2-Dibromoethane (EDB)	ND ug/L	ug/L	1.0	0.27	1			02/22/09 01:19	106-93-4		
Dibromomethane	ND ug/L	ug/L	10.0	0.21	1			02/22/09 01:19	74-95-3		
1,2-Dichlorobenzene	ND ug/L	ug/L	5.0	0.30	1			02/22/09 01:19	95-50-1		
1,4-Dichlorobenzene	ND ug/L	ug/L	1.0	0.33	1			02/22/09 01:19	106-46-7		
trans-1,4-Dichloro-2-butene	ND ug/L	ug/L	100	1.0	1			02/22/09 01:19	110-57-6		
1,1-Dichloroethane	ND ug/L	ug/L	5.0	0.32	1			02/22/09 01:19	75-34-3		
1,2-Dichloroethane	ND ug/L	ug/L	1.0	0.12	1			02/22/09 01:19	107-06-2		
1,1-Dichloroethene	ND ug/L	ug/L	5.0	0.56	1			02/22/09 01:19	75-35-4		
cis-1,2-Dichloroethene	ND ug/L	ug/L	5.0	0.19	1			02/22/09 01:19	156-59-2		
trans-1,2-Dichloroethene	ND ug/L	ug/L	5.0	0.49	1			02/22/09 01:19	156-60-5		
1,2-Dichloropropane	ND ug/L	ug/L	1.0	0.27	1			02/22/09 01:19	78-87-5		
1,3-Dichloropropane	ND ug/L	ug/L	1.0	0.28	1			02/22/09 01:19	142-28-9		
cis-1,3-Dichloropropene	ND ug/L	ug/L	1.0	0.13	1			02/22/09 01:19	10061-01-5		

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: MW-4	Lab ID: 9238318005	Collected: 02/17/09 09:30	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		02/22/09 01:19	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		02/22/09 01:19	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		02/22/09 01:19	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		02/22/09 01:19	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		02/22/09 01:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		02/22/09 01:19	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		02/22/09 01:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		02/22/09 01:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		02/22/09 01:19	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		02/22/09 01:19	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		02/22/09 01:19	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		02/22/09 01:19	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		02/22/09 01:19	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		02/22/09 01:19	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		02/22/09 01:19	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		02/22/09 01:19	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		02/22/09 01:19	108-05-4	
Vinyl chloride	ND ug/L		1.0	0.62	1		02/22/09 01:19	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		02/22/09 01:19	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		02/22/09 01:19	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		02/22/09 01:19	95-47-6	
4-Bromofluorobenzene (S)	97 %		87-109		1		02/22/09 01:19	460-00-4	
Dibromofluoromethane (S)	106 %		85-115		1		02/22/09 01:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	105 %		79-120		1		02/22/09 01:19	17060-07-0	
Toluene-d8 (S)	100 %		70-120		1		02/22/09 01:19	2037-26-5	

## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active  
Pace Project No.: 9238318

Sample: MW-5	Lab ID: 9238318006	Collected: 02/17/09 11:30	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND ug/L		6.0	2.6	1	02/24/09 12:50	02/24/09 22:31	7440-36-0	
Arsenic	5.9J ug/L		10.0	2.7	1	02/24/09 12:50	02/24/09 22:31	7440-38-2	
Barium	67.8J ug/L		100	0.20	1	02/24/09 12:50	02/24/09 22:31	7440-39-3	
Beryllium	0.96J ug/L		1.0	0.10	1	02/24/09 12:50	02/24/09 22:31	7440-41-7	
Cadmium	11.3 ug/L		1.0	0.50	1	02/24/09 12:50	02/24/09 22:31	7440-43-9	
Chromium	4.4J ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:31	7440-47-3	
Cobalt	3.7J ug/L		10.0	0.60	1	02/24/09 12:50	02/24/09 22:31	7440-48-4	
Copper	7.7J ug/L		10.0	0.30	1	02/24/09 12:50	02/24/09 22:31	7440-50-8	
Lead	ND ug/L		10.0	4.0	1	02/24/09 12:50	02/24/09 22:31	7439-92-1	
Nickel	6.2J ug/L		50.0	1.7	1	02/24/09 12:50	02/24/09 22:31	7440-02-0	
Selenium	ND ug/L		10.0	3.8	1	02/24/09 12:50	02/24/09 22:31	7782-49-2	
Silver	ND ug/L		10.0	0.10	1	02/24/09 12:50	02/24/09 22:31	7440-22-4	
Thallium	ND ug/L		5.5	3.0	1	02/24/09 12:50	02/24/09 22:31	7440-28-0	
Vanadium	23.6J ug/L		25.0	0.20	1	02/24/09 12:50	02/24/09 22:31	7440-62-2	
Zinc	19.7 ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:31	7440-66-6	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		02/22/09 01:42	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		02/22/09 01:42	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		02/22/09 01:42	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		02/22/09 01:42	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		02/22/09 01:42	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		02/22/09 01:42	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		02/22/09 01:42	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		02/22/09 01:42	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		02/22/09 01:42	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		02/22/09 01:42	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		02/22/09 01:42	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		02/22/09 01:42	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		02/22/09 01:42	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		02/22/09 01:42	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		02/22/09 01:42	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		02/22/09 01:42	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		02/22/09 01:42	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		02/22/09 01:42	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		02/22/09 01:42	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		02/22/09 01:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		02/22/09 01:42	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		02/22/09 01:42	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		02/22/09 01:42	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		02/22/09 01:42	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.19	1		02/22/09 01:42	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		02/22/09 01:42	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		02/22/09 01:42	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		02/22/09 01:42	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		02/22/09 01:42	10061-01-5	

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## ANALYTICAL RESULTS

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

Sample: MW-5	Lab ID: 9238318006	Collected: 02/17/09 11:30	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		02/22/09 01:42	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		02/22/09 01:42	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		02/22/09 01:42	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		02/22/09 01:42	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		02/22/09 01:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		02/22/09 01:42	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		02/22/09 01:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		02/22/09 01:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		02/22/09 01:42	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		02/22/09 01:42	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		02/22/09 01:42	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		02/22/09 01:42	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		02/22/09 01:42	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		02/22/09 01:42	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		02/22/09 01:42	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		02/22/09 01:42	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		02/22/09 01:42	108-05-4	
Vinyl chloride	ND ug/L		1.0	0.62	1		02/22/09 01:42	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		02/22/09 01:42	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		02/22/09 01:42	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		02/22/09 01:42	95-47-6	
4-Bromofluorobenzene (S)	98 %		87-109		1		02/22/09 01:42	460-00-4	
Dibromofluoromethane (S)	106 %		85-115		1		02/22/09 01:42	1868-53-7	
1,2-Dichloroethane-d4 (S)	107 %		79-120		1		02/22/09 01:42	17060-07-0	
Toluene-d8 (S)	100 %		70-120		1		02/22/09 01:42	2037-26-5	

## ANALYTICAL RESULTS

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

Sample: MW-6	Lab ID: 9238318007	Collected: 02/17/09 10:30	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND ug/L		6.0	2.6	1	02/24/09 12:50	02/24/09 22:35	7440-36-0	
Arsenic	<b>3.7J</b> ug/L		10.0	2.7	1	02/24/09 12:50	02/24/09 22:35	7440-38-2	
Barium	<b>447</b> ug/L		100	0.20	1	02/24/09 12:50	02/24/09 22:35	7440-39-3	
Beryllium	<b>0.79J</b> ug/L		1.0	0.10	1	02/24/09 12:50	02/24/09 22:35	7440-41-7	
Cadmium	<b>2.3</b> ug/L		1.0	0.50	1	02/24/09 12:50	02/24/09 22:35	7440-43-9	
Chromium	<b>2.5J</b> ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:35	7440-47-3	
Cobalt	ND ug/L		10.0	0.60	1	02/24/09 12:50	02/24/09 22:35	7440-48-4	
Copper	<b>2.2J</b> ug/L		10.0	0.30	1	02/24/09 12:50	02/24/09 22:35	7440-50-8	
Lead	ND ug/L		10.0	4.0	1	02/24/09 12:50	02/24/09 22:35	7439-92-1	
Nickel	<b>5.4J</b> ug/L		50.0	1.7	1	02/24/09 12:50	02/24/09 22:35	7440-02-0	
Selenium	ND ug/L		10.0	3.8	1	02/24/09 12:50	02/24/09 22:35	7782-49-2	
Silver	ND ug/L		10.0	0.10	1	02/24/09 12:50	02/24/09 22:35	7440-22-4	
Thallium	ND ug/L		5.5	3.0	1	02/24/09 12:50	02/24/09 22:35	7440-28-0	
Vanadium	<b>3.0J</b> ug/L		25.0	0.20	1	02/24/09 12:50	02/24/09 22:35	7440-62-2	
Zinc	<b>5.8J</b> ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:35	7440-66-6	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		02/22/09 02:06	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		02/22/09 02:06	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		02/22/09 02:06	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		02/22/09 02:06	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		02/22/09 02:06	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		02/22/09 02:06	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		02/22/09 02:06	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		02/22/09 02:06	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		02/22/09 02:06	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		02/22/09 02:06	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		02/22/09 02:06	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		02/22/09 02:06	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		02/22/09 02:06	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		02/22/09 02:06	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		02/22/09 02:06	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		02/22/09 02:06	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		02/22/09 02:06	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		02/22/09 02:06	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		02/22/09 02:06	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		02/22/09 02:06	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		02/22/09 02:06	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		02/22/09 02:06	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		02/22/09 02:06	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		02/22/09 02:06	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.19	1		02/22/09 02:06	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		02/22/09 02:06	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		02/22/09 02:06	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		02/22/09 02:06	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		02/22/09 02:06	10061-01-5	

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## ANALYTICAL RESULTS

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

Sample: MW-6	Lab ID: 9238318007	Collected: 02/17/09 10:30	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		02/22/09 02:06	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		02/22/09 02:06	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		02/22/09 02:06	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		02/22/09 02:06	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		02/22/09 02:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		02/22/09 02:06	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		02/22/09 02:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		02/22/09 02:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		02/22/09 02:06	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		02/22/09 02:06	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		02/22/09 02:06	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		02/22/09 02:06	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		02/22/09 02:06	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		02/22/09 02:06	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		02/22/09 02:06	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		02/22/09 02:06	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		02/22/09 02:06	108-05-4	
Vinyl chloride	ND ug/L		1.0	0.62	1		02/22/09 02:06	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		02/22/09 02:06	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		02/22/09 02:06	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		02/22/09 02:06	95-47-6	
4-Bromofluorobenzene (S)	98 %		87-109		1		02/22/09 02:06	460-00-4	
Dibromofluoromethane (S)	106 %		85-115		1		02/22/09 02:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	107 %		79-120		1		02/22/09 02:06	17060-07-0	
Toluene-d8 (S)	101 %		70-120		1		02/22/09 02:06	2037-26-5	

## ANALYTICAL RESULTS

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

Sample: MW-7	Lab ID: 9238318008	Collected: 02/17/09 13:00	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND ug/L		6.0	2.6	1	02/24/09 12:50	02/24/09 22:39	7440-36-0	
Arsenic	<b>2.9J</b> ug/L		10.0	2.7	1	02/24/09 12:50	02/24/09 22:39	7440-38-2	
Barium	<b>60.0J</b> ug/L		100	0.20	1	02/24/09 12:50	02/24/09 22:39	7440-39-3	
Beryllium	ND ug/L		1.0	0.10	1	02/24/09 12:50	02/24/09 22:39	7440-41-7	
Cadmium	ND ug/L		1.0	0.50	1	02/24/09 12:50	02/24/09 22:39	7440-43-9	
Chromium	<b>4.7J</b> ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:39	7440-47-3	
Cobalt	ND ug/L		10.0	0.60	1	02/24/09 12:50	02/24/09 22:39	7440-48-4	
Copper	<b>1.6J</b> ug/L		10.0	0.30	1	02/24/09 12:50	02/24/09 22:39	7440-50-8	
Lead	ND ug/L		10.0	4.0	1	02/24/09 12:50	02/24/09 22:39	7439-92-1	
Nickel	ND ug/L		50.0	1.7	1	02/24/09 12:50	02/24/09 22:39	7440-02-0	
Selenium	ND ug/L		10.0	3.8	1	02/24/09 12:50	02/24/09 22:39	7782-49-2	
Silver	ND ug/L		10.0	0.10	1	02/24/09 12:50	02/24/09 22:39	7440-22-4	
Thallium	ND ug/L		5.5	3.0	1	02/24/09 12:50	02/24/09 22:39	7440-28-0	
Vanadium	<b>14.8J</b> ug/L		25.0	0.20	1	02/24/09 12:50	02/24/09 22:39	7440-62-2	
Zinc	<b>0.58J</b> ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:39	7440-66-6	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		02/22/09 02:30	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		02/22/09 02:30	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		02/22/09 02:30	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		02/22/09 02:30	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		02/22/09 02:30	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		02/22/09 02:30	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		02/22/09 02:30	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		02/22/09 02:30	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		02/22/09 02:30	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		02/22/09 02:30	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		02/22/09 02:30	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		02/22/09 02:30	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		02/22/09 02:30	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		02/22/09 02:30	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		02/22/09 02:30	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		02/22/09 02:30	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		02/22/09 02:30	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		02/22/09 02:30	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		02/22/09 02:30	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		02/22/09 02:30	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		02/22/09 02:30	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		02/22/09 02:30	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		02/22/09 02:30	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		02/22/09 02:30	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.19	1		02/22/09 02:30	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		02/22/09 02:30	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		02/22/09 02:30	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		02/22/09 02:30	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		02/22/09 02:30	10061-01-5	

Date: 02/26/2009 11:22 AM

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: MW-7	Lab ID: 9238318008	Collected: 02/17/09 13:00	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		02/22/09 02:30	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		02/22/09 02:30	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		02/22/09 02:30	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		02/22/09 02:30	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		02/22/09 02:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		02/22/09 02:30	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		02/22/09 02:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		02/22/09 02:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		02/22/09 02:30	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		02/22/09 02:30	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		02/22/09 02:30	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		02/22/09 02:30	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		02/22/09 02:30	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		02/22/09 02:30	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		02/22/09 02:30	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		02/22/09 02:30	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		02/22/09 02:30	108-05-4	
Vinyl chloride	ND ug/L		1.0	0.62	1		02/22/09 02:30	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		02/22/09 02:30	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		02/22/09 02:30	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		02/22/09 02:30	95-47-6	
4-Bromofluorobenzene (S)	98 %		87-109		1		02/22/09 02:30	460-00-4	
Dibromofluoromethane (S)	105 %		85-115		1		02/22/09 02:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	106 %		79-120		1		02/22/09 02:30	17060-07-0	
Toluene-d8 (S)	99 %		70-120		1		02/22/09 02:30	2037-26-5	

## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: SW-1	Lab ID: 9238318009	Collected: 02/17/09 15:45	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 ICP Groundwater</b>		Analytical Method: EPA 6010 Preparation Method: EPA 3010							
Antimony	ND ug/L		6.0	2.6	1	02/24/09 12:50	02/24/09 22:42	7440-36-0	
Arsenic	ND ug/L		10.0	2.7	1	02/24/09 12:50	02/24/09 22:42	7440-38-2	
Barium	<b>71.3J</b> ug/L		100	0.20	1	02/24/09 12:50	02/24/09 22:42	7440-39-3	
Beryllium	ND ug/L		1.0	0.10	1	02/24/09 12:50	02/24/09 22:42	7440-41-7	
Cadmium	ND ug/L		1.0	0.50	1	02/24/09 12:50	02/24/09 22:42	7440-43-9	
Chromium	<b>1.3J</b> ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:42	7440-47-3	
Cobalt	ND ug/L		10.0	0.60	1	02/24/09 12:50	02/24/09 22:42	7440-48-4	
Copper	ND ug/L		10.0	0.30	1	02/24/09 12:50	02/24/09 22:42	7440-50-8	
Lead	ND ug/L		10.0	4.0	1	02/24/09 12:50	02/24/09 22:42	7439-92-1	
Nickel	<b>2.1J</b> ug/L		50.0	1.7	1	02/24/09 12:50	02/24/09 22:42	7440-02-0	
Selenium	ND ug/L		10.0	3.8	1	02/24/09 12:50	02/24/09 22:42	7782-49-2	
Silver	<b>0.11J</b> ug/L		10.0	0.10	1	02/24/09 12:50	02/24/09 22:42	7440-22-4	
Thallium	ND ug/L		5.5	3.0	1	02/24/09 12:50	02/24/09 22:42	7440-28-0	
Vanadium	<b>0.96J</b> ug/L		25.0	0.20	1	02/24/09 12:50	02/24/09 22:42	7440-62-2	
Zinc	<b>9.4J</b> ug/L		10.0	0.40	1	02/24/09 12:50	02/24/09 22:42	7440-66-6	
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		02/22/09 02:53	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		02/22/09 02:53	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		02/22/09 02:53	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		02/22/09 02:53	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		02/22/09 02:53	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		02/22/09 02:53	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		02/22/09 02:53	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		02/22/09 02:53	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		02/22/09 02:53	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		02/22/09 02:53	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		02/22/09 02:53	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		02/22/09 02:53	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		02/22/09 02:53	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		02/22/09 02:53	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		02/22/09 02:53	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		02/22/09 02:53	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		02/22/09 02:53	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		02/22/09 02:53	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		02/22/09 02:53	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		02/22/09 02:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		02/22/09 02:53	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		02/22/09 02:53	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		02/22/09 02:53	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		02/22/09 02:53	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.19	1		02/22/09 02:53	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		02/22/09 02:53	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		02/22/09 02:53	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		02/22/09 02:53	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		02/22/09 02:53	10061-01-5	

Date: 02/26/2009 11:22 AM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

Sample: SW-1	Lab ID: 9238318009	Collected: 02/17/09 15:45	Received: 02/18/09 16:55	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		02/22/09 02:53	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		02/22/09 02:53	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		02/22/09 02:53	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		02/22/09 02:53	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		02/22/09 02:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		02/22/09 02:53	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		02/22/09 02:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		02/22/09 02:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		02/22/09 02:53	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		02/22/09 02:53	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		02/22/09 02:53	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		02/22/09 02:53	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		02/22/09 02:53	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		02/22/09 02:53	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		02/22/09 02:53	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		02/22/09 02:53	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		02/22/09 02:53	108-05-4	
Vinyl chloride	ND ug/L		1.0	0.62	1		02/22/09 02:53	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		02/22/09 02:53	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		02/22/09 02:53	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		02/22/09 02:53	95-47-6	
4-Bromofluorobenzene (S)	97 %		87-109		1		02/22/09 02:53	460-00-4	
Dibromofluoromethane (S)	107 %		85-115		1		02/22/09 02:53	1868-53-7	
1,2-Dichloroethane-d4 (S)	107 %		79-120		1		02/22/09 02:53	17060-07-0	
Toluene-d8 (S)	101 %		70-120		1		02/22/09 02:53	2037-26-5	

## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

QC Batch: WETA/4488 Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.

Associated Lab Samples: 9238318001, 9238318002, 9238318003

METHOD BLANK: 238792 Matrix: Water

Associated Lab Samples: 9238318001, 9238318002, 9238318003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	ug/L	ND	100	02/18/09 23:10	

LABORATORY CONTROL SAMPLE: 238793

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	5000	5150	103	90-110	

MATRIX SPIKE SAMPLE: 238794

Parameter	Units	9238316003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	0.82 mg/L	5000	8050	145	90-110	M0

MATRIX SPIKE SAMPLE: 238795

Parameter	Units	9238218001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	ug/L	0.72 mg/L	5000	6740	120	90-110	M0

SAMPLE DUPLICATE: 238796

Parameter	Units	9238316002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	ug/L	0.84 mg/L	820	2	20	

SAMPLE DUPLICATE: 238797

Parameter	Units	9238218007 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	ug/L	1.5 mg/L	1550	.06	20	

## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

QC Batch:	MPRP/3869	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET NC Groundwater
Associated Lab Samples:	9238318001, 9238318002, 9238318003, 9238318004, 9238318005, 9238318006, 9238318007, 9238318008, 9238318009		

METHOD BLANK: 240521                                  Matrix: Water

Associated Lab Samples: 9238318001, 9238318002, 9238318003, 9238318004, 9238318005, 9238318006, 9238318007, 9238318008, 9238318009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	ND	6.0	02/24/09 21:22	
Arsenic	ug/L	ND	10.0	02/24/09 21:22	
Barium	ug/L	ND	100	02/24/09 21:22	
Beryllium	ug/L	ND	1.0	02/24/09 21:22	
Cadmium	ug/L	ND	1.0	02/24/09 21:22	
Chromium	ug/L	ND	10.0	02/24/09 21:22	
Cobalt	ug/L	ND	10.0	02/24/09 21:22	
Copper	ug/L	ND	10.0	02/24/09 21:22	
Lead	ug/L	ND	10.0	02/24/09 21:22	
Nickel	ug/L	ND	50.0	02/24/09 21:22	
Selenium	ug/L	ND	10.0	02/24/09 21:22	
Silver	ug/L	ND	10.0	02/24/09 21:22	
Thallium	ug/L	ND	5.5	02/24/09 21:22	
Vanadium	ug/L	ND	25.0	02/24/09 21:22	
Zinc	ug/L	ND	10.0	02/24/09 21:22	

LABORATORY CONTROL SAMPLE: 240522

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	588	118	80-120	
Arsenic	ug/L	500	561	112	80-120	
Barium	ug/L	500	572	114	80-120	
Beryllium	ug/L	500	598	120	80-120	
Cadmium	ug/L	500	558	112	80-120	
Chromium	ug/L	500	574	115	80-120	
Cobalt	ug/L	500	564	113	80-120	
Copper	ug/L	500	577	115	80-120	
Lead	ug/L	500	568	114	80-120	
Nickel	ug/L	500	565	113	80-120	
Selenium	ug/L	500	561	112	80-120	
Silver	ug/L	250	276	110	80-120	
Thallium	ug/L	500	517	103	80-120	
Vanadium	ug/L	500	574	115	80-120	
Zinc	ug/L	500	568	114	80-120	

## QUALITY CONTROL DATA

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

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MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 240523      240524

Parameter	Units	9237896001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec	Max	
			Spike Conc.	Spike Conc.						RPD	RPD
Antimony	ug/L	ND	500	500	523	514	105	103	75-125	2	25
Arsenic	ug/L	ND	500	500	505	493	101	98	75-125	2	25
Barium	ug/L	71.3J	500	500	575	569	101	100	75-125	1	25
Beryllium	ug/L	3.3	500	500	538	529	107	105	75-125	2	25
Cadmium	ug/L	0.69J	500	500	497	484	99	97	75-125	3	25
Chromium	ug/L	1.1J	500	500	512	502	102	100	75-125	2	25
Cobalt	ug/L	ND	500	500	499	489	100	98	75-125	2	25
Copper	ug/L	1.3J	500	500	510	504	102	101	75-125	1	25
Lead	ug/L	ND	500	500	493	481	99	96	75-125	2	25
Nickel	ug/L	ND	500	500	500	491	100	98	75-125	2	25
Selenium	ug/L	ND	500	500	501	493	100	98	75-125	2	25
Silver	ug/L	0.12J	250	250	247	240	99	96	75-125	3	25
Thallium	ug/L	ND	500	500	455	447	91	89	75-125	2	25
Vanadium	ug/L	2.0J	500	500	510	502	102	100	75-125	2	25
Zinc	ug/L	2.4J	500	500	520	505	104	101	75-125	3	25

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SAMPLE DUPLICATE: 240525

Parameter	Units	9237896002 Result	Dup	RPD	Max RPD	Qualifiers
			Result			
Antimony	ug/L	ND	ND		25	
Arsenic	ug/L	ND	3.3J		25	
Barium	ug/L	49.1J	57.9J	16	25	
Beryllium	ug/L	3.0	3.1	6	25	
Cadmium	ug/L	ND	ND		25	
Chromium	ug/L	0.85J	0.86J		25	
Cobalt	ug/L	ND	ND		25	
Copper	ug/L	1.5J	2.2J		25	
Lead	ug/L	ND	ND		25	
Nickel	ug/L	ND	ND		25	
Selenium	ug/L	ND	ND		25	
Silver	ug/L	0.21J	0.20J		25	
Thallium	ug/L	ND	ND		25	
Vanadium	ug/L	1.0J	1.1J		25	
Zinc	ug/L	ND	11.3		25	

## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

QC Batch:	WETA/4506	Analysis Method:	ASTM D516-90
QC Batch Method:	ASTM D516-90	Analysis Description:	ASTM D516-90 Sulfate Water
Associated Lab Samples:	9238318001, 9238318002, 9238318003		

METHOD BLANK: 239571 Matrix: Water

Associated Lab Samples: 9238318001, 9238318002, 9238318003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	ND	5000	02/20/09 10:54	

LABORATORY CONTROL SAMPLE: 239572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	20000	100	90-110	

MATRIX SPIKE SAMPLE: 239573

Parameter	Units	9237472006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	769 mg/L	20000	811000	213	75-125	M0

MATRIX SPIKE SAMPLE: 239575

Parameter	Units	9238057004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	2390 mg/L	20000	2470000	399	75-125	M0

SAMPLE DUPLICATE: 239574

Parameter	Units	9237951005 Result	Dup Result	Max RPD	Qualifiers
Sulfate	ug/L	762 mg/L	769000	.9	20

SAMPLE DUPLICATE: 239576

Parameter	Units	9238182001 Result	Dup Result	Max RPD	Qualifiers
Sulfate	ug/L	39000	95100	84	20 R1

## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

QC Batch: WET/7355 Analysis Method: SM 3500-Fe D#4

QC Batch Method: SM 3500-Fe D#4 Analysis Description: Iron, Ferrous

Associated Lab Samples: 9238318002

METHOD BLANK: 241339 Matrix: Water

Associated Lab Samples: 9238318002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	02/25/09 11:09	

LABORATORY CONTROL SAMPLE: 241340

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.6	106	90-110	

SAMPLE DUPLICATE: 241341

Parameter	Units	9238317002 Result	Dup Result	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND	20	

## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

QC Batch:	WET/7335	Analysis Method:	SM 4500-S2D
QC Batch Method:	SM 4500-S2D	Analysis Description:	4500S2D Sulfide Water
Associated Lab Samples:	9238318001, 9238318002, 9238318003		

METHOD BLANK:	240438	Matrix:	Water
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Associated Lab Samples: 9238318001, 9238318002, 9238318003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	0.10	02/23/09 13:43	

LABORATORY CONTROL SAMPLE: 240439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 240440

Parameter	Units	9238318001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	0.25	1	1.0	80	75-125	

MATRIX SPIKE SAMPLE: 240443

Parameter	Units	9238385002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	1	ND	1	75-125	M0

SAMPLE DUPLICATE: 240442

Parameter	Units	9238318002 Result	Dup Result	Max RPD	Qualifiers
Sulfide	mg/L	ND	ND	20	

SAMPLE DUPLICATE: 240444

Parameter	Units	9238457004 Result	Dup Result	Max RPD	Qualifiers
Sulfide	mg/L	ND	ND	20	

## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

QC Batch:	WET/7349	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
Associated Lab Samples:	9238318001, 9238318002, 9238318003		

METHOD BLANK:	241235	Matrix:	Water
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Associated Lab Samples: 9238318001, 9238318002, 9238318003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	ND	5.0	02/24/09 19:00	

LABORATORY CONTROL SAMPLE: 241236

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	50	49.2	98	90-110	

SAMPLE DUPLICATE: 241237

Parameter	Units	9237719001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	16.4	16.4	0	20	

## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

QC Batch:	MSV/6165	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	9238318001, 9238318002, 9238318003, 9238318004, 9238318005, 9238318006, 9238318007, 9238318008, 9238318009		

METHOD BLANK: 239877   Matrix: Water

Associated Lab Samples: 9238318001, 9238318002, 9238318003, 9238318004, 9238318005, 9238318006, 9238318007, 9238318008, 9238318009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	02/21/09 18:11	
1,1,1-Trichloroethane	ug/L	ND	1.0	02/21/09 18:11	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	02/21/09 18:11	
1,1,2-Trichloroethane	ug/L	ND	1.0	02/21/09 18:11	
1,1-Dichloroethane	ug/L	ND	5.0	02/21/09 18:11	
1,1-Dichloroethene	ug/L	ND	5.0	02/21/09 18:11	
1,2,3-Trichloropropane	ug/L	ND	1.0	02/21/09 18:11	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	02/21/09 18:11	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	02/21/09 18:11	
1,2-Dichlorobenzene	ug/L	ND	5.0	02/21/09 18:11	
1,2-Dichloroethane	ug/L	ND	1.0	02/21/09 18:11	
1,2-Dichloropropane	ug/L	ND	1.0	02/21/09 18:11	
1,3-Dichloropropane	ug/L	ND	1.0	02/21/09 18:11	
1,4-Dichlorobenzene	ug/L	ND	1.0	02/21/09 18:11	
2-Butanone (MEK)	ug/L	ND	100	02/21/09 18:11	
2-Hexanone	ug/L	ND	50.0	02/21/09 18:11	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	02/21/09 18:11	
Acetone	ug/L	ND	100	02/21/09 18:11	
Acrylonitrile	ug/L	ND	200	02/21/09 18:11	
Benzene	ug/L	ND	1.0	02/21/09 18:11	
Bromochloromethane	ug/L	ND	3.0	02/21/09 18:11	
Bromodichloromethane	ug/L	ND	1.0	02/21/09 18:11	
Bromoform	ug/L	ND	3.0	02/21/09 18:11	
Bromomethane	ug/L	ND	10.0	02/21/09 18:11	
Carbon disulfide	ug/L	ND	100	02/21/09 18:11	
Carbon tetrachloride	ug/L	ND	1.0	02/21/09 18:11	
Chlorobenzene	ug/L	ND	3.0	02/21/09 18:11	
Chloroethane	ug/L	ND	10.0	02/21/09 18:11	
Chloroform	ug/L	ND	5.0	02/21/09 18:11	
Chloromethane	ug/L	ND	1.0	02/21/09 18:11	
cis-1,2-Dichloroethene	ug/L	ND	5.0	02/21/09 18:11	
cis-1,3-Dichloropropene	ug/L	ND	1.0	02/21/09 18:11	
Dibromochloromethane	ug/L	ND	3.0	02/21/09 18:11	
Dibromomethane	ug/L	ND	10.0	02/21/09 18:11	
Ethylbenzene	ug/L	ND	1.0	02/21/09 18:11	
Iodomethane	ug/L	ND	10.0	02/21/09 18:11	
m&p-Xylene	ug/L	ND	2.0	02/21/09 18:11	
Methylene Chloride	ug/L	ND	2.0	02/21/09 18:11	
o-Xylene	ug/L	ND	1.0	02/21/09 18:11	
Styrene	ug/L	ND	1.0	02/21/09 18:11	
Tetrachloroethene	ug/L	ND	1.0	02/21/09 18:11	

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## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

METHOD BLANK: 239877

Matrix: Water

Associated Lab Samples: 9238318001, 9238318002, 9238318003, 9238318004, 9238318005, 9238318006, 9238318007, 9238318008,  
9238318009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Toluene	ug/L	ND	1.0	02/21/09 18:11	
trans-1,2-Dichloroethene	ug/L	ND	5.0	02/21/09 18:11	
trans-1,3-Dichloropropene	ug/L	ND	1.0	02/21/09 18:11	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	02/21/09 18:11	
Trichloroethene	ug/L	ND	1.0	02/21/09 18:11	
Trichlorofluoromethane	ug/L	ND	1.0	02/21/09 18:11	
Vinyl acetate	ug/L	ND	50.0	02/21/09 18:11	
Vinyl chloride	ug/L	ND	1.0	02/21/09 18:11	
Xylene (Total)	ug/L	ND	5.0	02/21/09 18:11	
1,2-Dichloroethane-d4 (S)	%	103	79-120	02/21/09 18:11	
4-Bromofluorobenzene (S)	%	98	87-109	02/21/09 18:11	
Dibromofluoromethane (S)	%	104	85-115	02/21/09 18:11	
Toluene-d8 (S)	%	99	70-120	02/21/09 18:11	

LABORATORY CONTROL SAMPLE: 239878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.2	98	83-125	
1,1,1-Trichloroethane	ug/L	50	50.0	100	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	50.7	101	73-127	
1,1,2-Trichloroethane	ug/L	50	50.6	101	77-123	
1,1-Dichloroethane	ug/L	50	50.2	100	76-129	
1,1-Dichloroethene	ug/L	50	50.2	100	78-146	
1,2,3-Trichloropropane	ug/L	50	50.0	100	72-125	
1,2-Dibromo-3-chloropropane	ug/L	50	47.7	95	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	51.6	103	81-125	
1,2-Dichlorobenzene	ug/L	50	46.8	94	82-126	
1,2-Dichloroethane	ug/L	50	48.6	97	72-126	
1,2-Dichloropropane	ug/L	50	48.5	97	80-127	
1,3-Dichloropropane	ug/L	50	49.5	99	79-124	
1,4-Dichlorobenzene	ug/L	50	49.1	98	79-125	
2-Butanone (MEK)	ug/L	100	96.1J	96	50-134	
2-Hexanone	ug/L	100	94.2	94	58-138	
4-Methyl-2-pentanone (MIBK)	ug/L	100	108	108	70-131	
Acetone	ug/L	100	89.0J	89	50-146	
Acrylonitrile	ug/L	250	245	98	66-124	
Benzene	ug/L	50	48.5	97	78-128	
Bromochloromethane	ug/L	50	46.9	94	73-124	
Bromodichloromethane	ug/L	50	48.2	96	81-125	
Bromoform	ug/L	50	51.1	102	71-125	
Bromomethane	ug/L	50	50.5	101	50-150	
Carbon disulfide	ug/L	50	48.7J	97	54-150	
Carbon tetrachloride	ug/L	50	47.9	96	81-137	
Chlorobenzene	ug/L	50	45.6	91	82-126	

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## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

LABORATORY CONTROL SAMPLE: 239878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroethane	ug/L	50	47.8	96	69-140	
Chloroform	ug/L	50	47.9	96	77-129	
Chloromethane	ug/L	50	48.8	98	54-139	
cis-1,2-Dichloroethene	ug/L	50	49.0	98	76-133	
cis-1,3-Dichloropropene	ug/L	50	50.6	101	76-127	
Dibromochloromethane	ug/L	50	49.2	98	77-125	
Dibromomethane	ug/L	50	49.4	99	77-125	
Ethylbenzene	ug/L	50	48.9	98	80-127	
Iodomethane	ug/L	100	105	105	65-172	
m&p-Xylene	ug/L	100	101	101	82-127	
Methylene Chloride	ug/L	50	39.6	79	67-133	
o-Xylene	ug/L	50	49.1	98	83-124	
Styrene	ug/L	50	51.7	103	80-130	
Tetrachloroethene	ug/L	50	50.4	101	78-128	
Toluene	ug/L	50	47.9	96	76-126	
trans-1,2-Dichloroethene	ug/L	50	46.7	93	78-134	
trans-1,3-Dichloropropene	ug/L	50	51.4	103	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	47.1J	94	51-140	
Trichloroethene	ug/L	50	48.5	97	79-127	
Trichlorofluoromethane	ug/L	50	50.1	100	76-148	
Vinyl acetate	ug/L	100	102	102	50-150	
Vinyl chloride	ug/L	50	49.8	100	67-143	
Xylene (Total)	ug/L	150	150	100	83-125	
1,2-Dichloroethane-d4 (S)	%			103	79-120	
4-Bromofluorobenzene (S)	%			100	87-109	
Dibromofluoromethane (S)	%			99	85-115	
Toluene-d8 (S)	%			99	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 240206 240207

Parameter	Units	9237691008 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
1,1-Dichloroethene	ug/L	ND	50	50	46.6	41.7	93	83	60-150	11	30	
Benzene	ug/L	ND	50	50	52.6	51.2	105	102	74-136	3	30	
Chlorobenzene	ug/L	ND	50	50	50.5	49.5	101	99	79-135	2	30	
Toluene	ug/L	ND	50	50	52.8	51.1	105	102	73-131	3	30	
Trichloroethene	ug/L	ND	50	50	51.9	50.4	104	101	73-131	3	30	
1,2-Dichloroethane-d4 (S)	%						101	101	79-120			
4-Bromofluorobenzene (S)	%						97	96	87-109			
Dibromofluoromethane (S)	%						101	100	85-115			
Toluene-d8 (S)	%						97	97	70-120			

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## QUALITY CONTROL DATA

Project: Wayne Co Closed &amp; Active

Pace Project No.: 9238318

QC Batch: WET/7323 Analysis Method: SM 3500-Fe D#4

QC Batch Method: SM 3500-Fe D#4 Analysis Description: Iron, Ferrous

Associated Lab Samples: 9238318001, 9238318003

METHOD BLANK: 239895 Matrix: Water

Associated Lab Samples: 9238318001, 9238318003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.50	02/25/09 10:35	

LABORATORY CONTROL SAMPLE: 239896

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1.5	1.5	100	90-110	

SAMPLE DUPLICATE: 239897

Parameter	Units	9238178007 Result	Dup Result	Max RPD	Qualifiers
Iron, Ferrous	mg/L	ND	ND	20	

## QUALITY CONTROL DATA

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

QC Batch:	WETA/4505	Analysis Method:	SM 5310B
QC Batch Method:	SM 5310B	Analysis Description:	5310B TOC
Associated Lab Samples:	9238318001, 9238318002, 9238318003		

METHOD BLANK: 239565 Matrix: Water

Associated Lab Samples: 9238318001, 9238318002, 9238318003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	02/20/09 10:00	

LABORATORY CONTROL SAMPLE: 239566

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	25	23.5	94	90-110	

MATRIX SPIKE SAMPLE: 239567

Parameter	Units	9238318001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	2.4	25	25.3	92	75-125	

MATRIX SPIKE SAMPLE: 239568

Parameter	Units	9238318002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	41.2	25	71.4	121	75-125	

SAMPLE DUPLICATE: 239569

Parameter	Units	9238318003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	23.7	22.7	4	20	

SAMPLE DUPLICATE: 239570

Parameter	Units	9238033007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Organic Carbon	mg/L	11.4	10.8	5	20	

## QUALIFIERS

Project: Wayne Co Closed & Active

Pace Project No.: 9238318

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

### LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

### ANALYTE QUALIFIERS

H3 Sample was received outside EPA method holding time.

M0 Matrix spike recovery was outside laboratory control limits.

R1 RPD value was outside control limits.

March 17, 2009

Mr. Jonathan Pfohl  
Municipal Engineering Services  
PO Box 97  
Garner, NC 27529

RE: Project: WAYNE CO LANDFILLS  
Pace Project No.: 9239600

Dear Mr. Pfohl:

Enclosed are the analytical results for sample(s) received by the laboratory on March 10, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Bonnie McKee

bonnie.mckee@pacelabs.com  
Project Manager

Enclosures

#### REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

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### Charlotte Certification IDs

West Virginia Certification #: 357  
Virginia Certification #: 00213  
Tennessee Certification #: 04010  
South Carolina Drinking Water Cert. #: 990060003  
South Carolina Certification #: 990060001  
Pennsylvania Certification #: 68-00784  
Connecticut Certification #: PH-0104

North Carolina Field Services Certification #: 5342  
North Carolina Drinking Water Certification #: 37706  
New Jersey Certification #: NC012  
Louisiana/LELAP Certification #: 04034  
Kentucky UST Certification #: 84  
Florida/NELAP Certification #: E87627  
North Carolina Wastewater Certification #: 12

### Asheville Certification IDs

West Virginia Certification #: 356  
Virginia Certification #: 00072  
Connecticut Certification #: PH-0106  
Florida/NELAP Certification #: E87648  
Tennessee Certification #: 2980  
South Carolina Certification #: 99030001  
South Carolina Bioassay Certification #: 99030002

Pennsylvania Certification #: 68-03578  
North Carolina Wastewater Certification #: 40  
North Carolina Drinking Water Certification #: 37712  
North Carolina Bioassay Certification #: 9  
New Jersey Certification #: NC011  
Massachusetts Certification #: M-NC030  
Louisiana/LELAP Certification #: 03095

### Eden Certification IDs

North Carolina Wastewater Certification #: 633  
Virginia Drinking Water Certification #: 00424

North Carolina Drinking Water Certification #: 37738

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9239600001	EB	Water	03/05/09 09:00	03/10/09 16:00
9239600002	FB	Water	03/05/09 09:10	03/10/09 16:00
9239600003	TB	Water	03/05/09 00:00	03/10/09 16:00

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: WAYNE CO LANDFILLS  
 Pace Project No.: 9239600

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9239600001	EB	EPA 8260	MCK	54	PASI-C
9239600002	FB	EPA 8260	MCK	54	PASI-C
9239600003	TB	EPA 8260	MCK	54	PASI-C

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

Sample: EB	Lab ID: 9239600001	Collected: 03/05/09 09:00	Received: 03/10/09 16:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		03/13/09 16:43	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		03/13/09 16:43	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		03/13/09 16:43	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		03/13/09 16:43	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		03/13/09 16:43	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		03/13/09 16:43	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		03/13/09 16:43	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		03/13/09 16:43	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		03/13/09 16:43	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		03/13/09 16:43	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		03/13/09 16:43	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		03/13/09 16:43	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		03/13/09 16:43	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		03/13/09 16:43	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		03/13/09 16:43	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		03/13/09 16:43	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		03/13/09 16:43	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		03/13/09 16:43	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		03/13/09 16:43	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		03/13/09 16:43	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		03/13/09 16:43	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		03/13/09 16:43	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		03/13/09 16:43	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		03/13/09 16:43	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.19	1		03/13/09 16:43	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		03/13/09 16:43	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		03/13/09 16:43	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		03/13/09 16:43	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		03/13/09 16:43	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		03/13/09 16:43	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		03/13/09 16:43	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		03/13/09 16:43	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		03/13/09 16:43	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		03/13/09 16:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		03/13/09 16:43	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		03/13/09 16:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		03/13/09 16:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		03/13/09 16:43	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		03/13/09 16:43	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		03/13/09 16:43	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		03/13/09 16:43	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		03/13/09 16:43	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		03/13/09 16:43	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		03/13/09 16:43	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		03/13/09 16:43	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		03/13/09 16:43	108-05-4	

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## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

Sample: EB	Lab ID: 9239600001	Collected: 03/05/09 09:00	Received: 03/10/09 16:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Vinyl chloride	ND ug/L		1.0	0.62	1		03/13/09 16:43	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		03/13/09 16:43	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		03/13/09 16:43	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		03/13/09 16:43	95-47-6	
4-Bromofluorobenzene (S)	95 %		87-109		1		03/13/09 16:43	460-00-4	
Dibromofluoromethane (S)	107 %		85-115		1		03/13/09 16:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	111 %		79-120		1		03/13/09 16:43	17060-07-0	
Toluene-d8 (S)	102 %		70-120		1		03/13/09 16:43	2037-26-5	

Date: 03/17/2009 04:40 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

Sample: FB	Lab ID: 9239600002	Collected: 03/05/09 09:10	Received: 03/10/09 16:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		03/13/09 17:06	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		03/13/09 17:06	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		03/13/09 17:06	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		03/13/09 17:06	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		03/13/09 17:06	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		03/13/09 17:06	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		03/13/09 17:06	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		03/13/09 17:06	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		03/13/09 17:06	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		03/13/09 17:06	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		03/13/09 17:06	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		03/13/09 17:06	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		03/13/09 17:06	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		03/13/09 17:06	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		03/13/09 17:06	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		03/13/09 17:06	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		03/13/09 17:06	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		03/13/09 17:06	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		03/13/09 17:06	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		03/13/09 17:06	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		03/13/09 17:06	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		03/13/09 17:06	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		03/13/09 17:06	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		03/13/09 17:06	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.19	1		03/13/09 17:06	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		03/13/09 17:06	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		03/13/09 17:06	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		03/13/09 17:06	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		03/13/09 17:06	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		03/13/09 17:06	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		03/13/09 17:06	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		03/13/09 17:06	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		03/13/09 17:06	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		03/13/09 17:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		03/13/09 17:06	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		03/13/09 17:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		03/13/09 17:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		03/13/09 17:06	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		03/13/09 17:06	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		03/13/09 17:06	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		03/13/09 17:06	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		03/13/09 17:06	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		03/13/09 17:06	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		03/13/09 17:06	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		03/13/09 17:06	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		03/13/09 17:06	108-05-4	

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## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

Sample: FB	Lab ID: 9239600002	Collected: 03/05/09 09:10	Received: 03/10/09 16:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Vinyl chloride	ND ug/L		1.0	0.62	1		03/13/09 17:06	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		03/13/09 17:06	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		03/13/09 17:06	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		03/13/09 17:06	95-47-6	
4-Bromofluorobenzene (S)	97 %		87-109		1		03/13/09 17:06	460-00-4	
Dibromofluoromethane (S)	108 %		85-115		1		03/13/09 17:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	111 %		79-120		1		03/13/09 17:06	17060-07-0	
Toluene-d8 (S)	102 %		70-120		1		03/13/09 17:06	2037-26-5	

Date: 03/17/2009 04:40 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

Sample: TB	Lab ID: 9239600003	Collected: 03/05/09 00:00	Received: 03/10/09 16:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Acetone	ND ug/L		100	2.2	1		03/13/09 16:19	67-64-1	
Acrylonitrile	ND ug/L		200	1.9	1		03/13/09 16:19	107-13-1	
Benzene	ND ug/L		1.0	0.25	1		03/13/09 16:19	71-43-2	
Bromochloromethane	ND ug/L		3.0	0.17	1		03/13/09 16:19	74-97-5	
Bromodichloromethane	ND ug/L		1.0	0.18	1		03/13/09 16:19	75-27-4	
Bromoform	ND ug/L		3.0	0.26	1		03/13/09 16:19	75-25-2	
Bromomethane	ND ug/L		10.0	0.29	1		03/13/09 16:19	74-83-9	
2-Butanone (MEK)	ND ug/L		100	0.96	1		03/13/09 16:19	78-93-3	
Carbon disulfide	ND ug/L		100	1.2	1		03/13/09 16:19	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	0.25	1		03/13/09 16:19	56-23-5	
Chlorobenzene	ND ug/L		3.0	0.23	1		03/13/09 16:19	108-90-7	
Chloroethane	ND ug/L		10.0	0.54	1		03/13/09 16:19	75-00-3	
Chloroform	ND ug/L		5.0	0.14	1		03/13/09 16:19	67-66-3	
Chloromethane	ND ug/L		1.0	0.11	1		03/13/09 16:19	74-87-3	
1,2-Dibromo-3-chloropropane	ND ug/L		13.0	2.5	1		03/13/09 16:19	96-12-8	
Dibromochloromethane	ND ug/L		3.0	0.21	1		03/13/09 16:19	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	0.27	1		03/13/09 16:19	106-93-4	
Dibromomethane	ND ug/L		10.0	0.21	1		03/13/09 16:19	74-95-3	
1,2-Dichlorobenzene	ND ug/L		5.0	0.30	1		03/13/09 16:19	95-50-1	
1,4-Dichlorobenzene	ND ug/L		1.0	0.33	1		03/13/09 16:19	106-46-7	
trans-1,4-Dichloro-2-butene	ND ug/L		100	1.0	1		03/13/09 16:19	110-57-6	
1,1-Dichloroethane	ND ug/L		5.0	0.32	1		03/13/09 16:19	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	0.12	1		03/13/09 16:19	107-06-2	
1,1-Dichloroethene	ND ug/L		5.0	0.56	1		03/13/09 16:19	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		5.0	0.19	1		03/13/09 16:19	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		5.0	0.49	1		03/13/09 16:19	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	0.27	1		03/13/09 16:19	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	0.28	1		03/13/09 16:19	142-28-9	
cis-1,3-Dichloropropene	ND ug/L		1.0	0.13	1		03/13/09 16:19	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	0.26	1		03/13/09 16:19	10061-02-6	
Ethylbenzene	ND ug/L		1.0	0.30	1		03/13/09 16:19	100-41-4	
2-Hexanone	ND ug/L		50.0	0.46	1		03/13/09 16:19	591-78-6	
Iodomethane	ND ug/L		10.0	0.32	1		03/13/09 16:19	74-88-4	
Methylene Chloride	ND ug/L		2.0	0.97	1		03/13/09 16:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		100	0.33	1		03/13/09 16:19	108-10-1	
Styrene	ND ug/L		1.0	0.26	1		03/13/09 16:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		5.0	0.33	1		03/13/09 16:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		3.0	0.40	1		03/13/09 16:19	79-34-5	
Tetrachloroethene	ND ug/L		1.0	0.46	1		03/13/09 16:19	127-18-4	
Toluene	ND ug/L		1.0	0.26	1		03/13/09 16:19	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	0.48	1		03/13/09 16:19	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	0.29	1		03/13/09 16:19	79-00-5	
Trichloroethene	ND ug/L		1.0	0.47	1		03/13/09 16:19	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	0.20	1		03/13/09 16:19	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	0.41	1		03/13/09 16:19	96-18-4	
Vinyl acetate	ND ug/L		50.0	0.35	1		03/13/09 16:19	108-05-4	

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## ANALYTICAL RESULTS

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

Sample: TB	Lab ID: 9239600003	Collected: 03/05/09 00:00	Received: 03/10/09 16:00	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Low Level</b>		Analytical Method: EPA 8260							
Vinyl chloride	ND ug/L		1.0	0.62	1		03/13/09 16:19	75-01-4	
Xylene (Total)	ND ug/L		5.0	0.66	1		03/13/09 16:19	1330-20-7	
m&p-Xylene	ND ug/L		2.0	0.66	1		03/13/09 16:19	1330-20-7	
o-Xylene	ND ug/L		1.0	0.23	1		03/13/09 16:19	95-47-6	
4-Bromofluorobenzene (S)	97 %		87-109		1		03/13/09 16:19	460-00-4	
Dibromofluoromethane (S)	107 %		85-115		1		03/13/09 16:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	109 %		79-120		1		03/13/09 16:19	17060-07-0	
Toluene-d8 (S)	103 %		70-120		1		03/13/09 16:19	2037-26-5	

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## QUALITY CONTROL DATA

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

QC Batch:	MSV/6400	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	9239600001, 9239600002, 9239600003		

METHOD BLANK: 249562	Matrix: Water
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Associated Lab Samples: 9239600001, 9239600002, 9239600003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	5.0	03/13/09 15:55	
1,1,1-Trichloroethane	ug/L	ND	1.0	03/13/09 15:55	
1,1,2,2-Tetrachloroethane	ug/L	ND	3.0	03/13/09 15:55	
1,1,2-Trichloroethane	ug/L	ND	1.0	03/13/09 15:55	
1,1-Dichloroethane	ug/L	ND	5.0	03/13/09 15:55	
1,1-Dichloroethene	ug/L	ND	5.0	03/13/09 15:55	
1,2,3-Trichloropropane	ug/L	ND	1.0	03/13/09 15:55	
1,2-Dibromo-3-chloropropane	ug/L	ND	13.0	03/13/09 15:55	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	03/13/09 15:55	
1,2-Dichlorobenzene	ug/L	ND	5.0	03/13/09 15:55	
1,2-Dichloroethane	ug/L	ND	1.0	03/13/09 15:55	
1,2-Dichloropropane	ug/L	ND	1.0	03/13/09 15:55	
1,3-Dichloropropane	ug/L	ND	1.0	03/13/09 15:55	
1,4-Dichlorobenzene	ug/L	ND	1.0	03/13/09 15:55	
2-Butanone (MEK)	ug/L	ND	100	03/13/09 15:55	
2-Hexanone	ug/L	ND	50.0	03/13/09 15:55	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	03/13/09 15:55	
Acetone	ug/L	ND	100	03/13/09 15:55	
Acrylonitrile	ug/L	ND	200	03/13/09 15:55	
Benzene	ug/L	ND	1.0	03/13/09 15:55	
Bromochloromethane	ug/L	ND	3.0	03/13/09 15:55	
Bromodichloromethane	ug/L	ND	1.0	03/13/09 15:55	
Bromoform	ug/L	ND	3.0	03/13/09 15:55	
Bromomethane	ug/L	ND	10.0	03/13/09 15:55	
Carbon disulfide	ug/L	ND	100	03/13/09 15:55	
Carbon tetrachloride	ug/L	ND	1.0	03/13/09 15:55	
Chlorobenzene	ug/L	ND	3.0	03/13/09 15:55	
Chloroethane	ug/L	ND	10.0	03/13/09 15:55	
Chloroform	ug/L	0.19J	5.0	03/13/09 15:55	
Chloromethane	ug/L	ND	1.0	03/13/09 15:55	
cis-1,2-Dichloroethene	ug/L	ND	5.0	03/13/09 15:55	
cis-1,3-Dichloropropene	ug/L	ND	1.0	03/13/09 15:55	
Dibromochloromethane	ug/L	ND	3.0	03/13/09 15:55	
Dibromomethane	ug/L	ND	10.0	03/13/09 15:55	
Ethylbenzene	ug/L	ND	1.0	03/13/09 15:55	
Iodomethane	ug/L	ND	10.0	03/13/09 15:55	
m&p-Xylene	ug/L	ND	2.0	03/13/09 15:55	
Methylene Chloride	ug/L	ND	2.0	03/13/09 15:55	
o-Xylene	ug/L	ND	1.0	03/13/09 15:55	
Styrene	ug/L	ND	1.0	03/13/09 15:55	
Tetrachloroethene	ug/L	ND	1.0	03/13/09 15:55	
Toluene	ug/L	ND	1.0	03/13/09 15:55	
trans-1,2-Dichloroethene	ug/L	ND	5.0	03/13/09 15:55	

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## QUALITY CONTROL DATA

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

METHOD BLANK: 249562

Matrix: Water

Associated Lab Samples: 9239600001, 9239600002, 9239600003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,3-Dichloropropene	ug/L	ND	1.0	03/13/09 15:55	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	03/13/09 15:55	
Trichloroethene	ug/L	ND	1.0	03/13/09 15:55	
Trichlorofluoromethane	ug/L	ND	1.0	03/13/09 15:55	
Vinyl acetate	ug/L	ND	50.0	03/13/09 15:55	
Vinyl chloride	ug/L	ND	1.0	03/13/09 15:55	
Xylene (Total)	ug/L	ND	5.0	03/13/09 15:55	
1,2-Dichloroethane-d4 (S)	%	107	79-120	03/13/09 15:55	
4-Bromofluorobenzene (S)	%	97	87-109	03/13/09 15:55	
Dibromofluoromethane (S)	%	105	85-115	03/13/09 15:55	
Toluene-d8 (S)	%	101	70-120	03/13/09 15:55	

LABORATORY CONTROL SAMPLE: 249563

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.9	102	83-125	
1,1,1-Trichloroethane	ug/L	50	52.0	104	80-129	
1,1,2,2-Tetrachloroethane	ug/L	50	53.4	107	73-127	
1,1,2-Trichloroethane	ug/L	50	48.7	97	77-123	
1,1-Dichloroethane	ug/L	50	52.4	105	76-129	
1,1-Dichloroethene	ug/L	50	56.1	112	78-146	
1,2,3-Trichloropropane	ug/L	50	52.4	105	72-125	
1,2-Dibromo-3-chloropropane	ug/L	50	53.2	106	65-128	
1,2-Dibromoethane (EDB)	ug/L	50	50.4	101	81-125	
1,2-Dichlorobenzene	ug/L	50	48.9	98	82-126	
1,2-Dichloroethane	ug/L	50	51.2	102	72-126	
1,2-Dichloropropane	ug/L	50	51.0	102	80-127	
1,3-Dichloropropane	ug/L	50	49.0	98	79-124	
1,4-Dichlorobenzene	ug/L	50	51.8	104	79-125	
2-Butanone (MEK)	ug/L	100	111	111	50-134	
2-Hexanone	ug/L	100	114	114	58-138	
4-Methyl-2-pentanone (MIBK)	ug/L	100	110	110	70-131	
Acetone	ug/L	100	120	120	50-146	
Acrylonitrile	ug/L	250	273	109	66-124	
Benzene	ug/L	50	49.9	100	78-128	
Bromochloromethane	ug/L	50	48.0	96	73-124	
Bromodichloromethane	ug/L	50	49.3	99	81-125	
Bromoform	ug/L	50	50.7	101	71-125	
Bromomethane	ug/L	50	47.9	96	50-150	
Carbon disulfide	ug/L	50	53.9J	108	54-150	
Carbon tetrachloride	ug/L	50	50.8	102	81-137	
Chlorobenzene	ug/L	50	46.8	94	82-126	
Chloroethane	ug/L	50	49.7	99	69-140	
Chloroform	ug/L	50	50.5	101	77-129	
Chloromethane	ug/L	50	45.1	90	54-139	

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## QUALITY CONTROL DATA

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

LABORATORY CONTROL SAMPLE: 249563

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	52.6	105	76-133	
cis-1,3-Dichloropropene	ug/L	50	51.1	102	76-127	
Dibromochloromethane	ug/L	50	48.3	97	77-125	
Dibromomethane	ug/L	50	50.8	102	77-125	
Ethylbenzene	ug/L	50	51.5	103	80-127	
Iodomethane	ug/L	100	132	132	65-172	
m&p-Xylene	ug/L	100	106	106	82-127	
Methylene Chloride	ug/L	50	53.7	107	67-133	
o-Xylene	ug/L	50	52.8	106	83-124	
Styrene	ug/L	50	55.3	111	80-130	
Tetrachloroethene	ug/L	50	50.4	101	78-128	
Toluene	ug/L	50	46.6	93	76-126	
trans-1,2-Dichloroethene	ug/L	50	50.6	101	78-134	
trans-1,3-Dichloropropene	ug/L	50	51.7	103	75-125	
trans-1,4-Dichloro-2-butene	ug/L	50	54.0J	108	51-140	
Trichloroethene	ug/L	50	49.3	99	79-127	
Trichlorofluoromethane	ug/L	50	49.6	99	76-148	
Vinyl acetate	ug/L	100	139	139	50-150	
Vinyl chloride	ug/L	50	48.7	97	67-143	
Xylene (Total)	ug/L	150	159	106	83-125	
1,2-Dichloroethane-d4 (S)	%			100	79-120	
4-Bromofluorobenzene (S)	%			106	87-109	
Dibromofluoromethane (S)	%			100	85-115	
Toluene-d8 (S)	%			98	70-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 249564 249565

Parameter	Units	MS Spike		MSD Spike		MS		MSD		% Rec Limits	RPD	RPD	Max Qual
		9239604017	Result	Conc.	Conc.	Result	Result	% Rec	% Rec				
1,1-Dichloroethene	ug/L	ND	50	50	51.2	49.0	102	98	60-150	4	30		
Benzene	ug/L	ND	50	50	52.8	51.7	106	103	74-136	2	30		
Chlorobenzene	ug/L	ND	50	50	50.1	50.1	100	100	79-135	.02	30		
Toluene	ug/L	ND	50	50	51.5	50.2	103	100	73-131	2	30		
Trichloroethene	ug/L	ND	50	50	52.2	50.0	104	100	73-131	4	30		
1,2-Dichloroethane-d4 (S)	%						105	108	79-120				
4-Bromofluorobenzene (S)	%							96	96	87-109			
Dibromofluoromethane (S)	%							103	104	85-115			
Toluene-d8 (S)	%							97	97	70-120			

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## QUALIFIERS

Project: WAYNE CO LANDFILLS

Pace Project No.: 9239600

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

### LABORATORIES

PASI-C Pace Analytical Services - Charlotte